

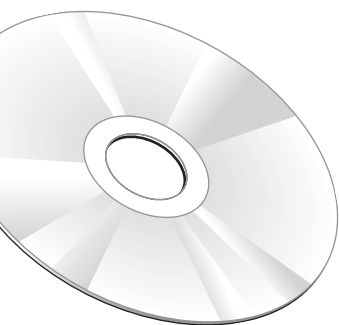
SYLVANIA

HDD & DVD Player / Recorder with Digital Tuner

Owner's Manual

H2160SL9

INSTRUCCIONES EN ESPAÑOL INCLUIDAS



TO RECEIVE DIGITAL/ANALOG SIGNAL, YOU MUST CONNECT ANTENNA.

IF YOU NEED ADDITIONAL ASSISTANCE WITH SETUP OR OPERATING AFTER
READING OWNER'S MANUAL, PLEASE CALL TOLL FREE **1-800-968-3429**, OR
VISIT OUR WEB SITE AT **<http://www.sylvania-ce.com>**

Quick Guide

HDD & DVD PLAYER / RECORDER
WITH DIGITAL TUNER

H2160SL9

Playable/Recordable Discs and Files

Discs for Recording, Playing back				
Disc type	DVD-RW		DVD-R	HDD
Logo				
Format	Can be formatted in VR or video mode		Automatically formatted in video mode	—
Maximum record time	Video Mode	VR Mode	480 min (12cm) 144 min (8cm)	240 hrs (with SLP mode)
	480 min (12cm) 144 min (8cm)	480 min (12cm) 144 min (8cm)		
Recordable/playable versions	Ver.1.1,1.2 Ver.1.1/2× CPRM compatible Ver.1.2/4× CPRM compatible		Ver.2.0 Ver.2.0/4× Ver.2.0/8× Ver.2.0/16×	—
Compatibility	Playable on most DVD players. Finalization necessary. (title menu will be created)	Playable only on VR mode compatible unit. Finalization recommended.	Playable on most DVD players. Finalization necessary. (title menu will be created)	—

Discs for playing back				
Disc Type	DVD-VIDEO	CD-DA	CD-RW	CD-R
Logo				

Files for playing back		
Type of title	MP3	JPEG
Media	CD-RW/-R	CD-RW/-R

is a trademark of DVD Format/Logo Licensing Corporation.

DVD players with **COMPATIBLE** are capable of playing DVD-RW recorded in VR mode.

Unplayable Discs

- The following discs will not play back on this unit.
- CD-ROM
 - Video Single Disc (VSD)
 - DVD-audio
 - DVD contains MP3 or JPEG files
 - DVD-RW/-R recorded in non compatible recording format
 - Blu-ray Disc
 - Super Video CD
 - Compact Disc-Interactive (CD-I)
 - DVD-ROM
 - Unfinalized disc
 - HD DVD

On the following disc, the sound may not be heard.

- Super audio CD - Only the sound on the CD layer can be heard. The sound on the high-density super audio CD layer cannot be heard.

Region Codes

The number inside the globe refers to region of the world. This unit can play DVD that are labeled for ALL regions or for Region 1.



• Following discs are recommended for good recording quality and are proven to be compatible with this unit. However, depending on the media condition the unit may not read the disc properly.

Verbatim DVD-R 8x, DVD-RW 2x
JVC DVD-RW 4x
Maxell DVD-R 8x/16x

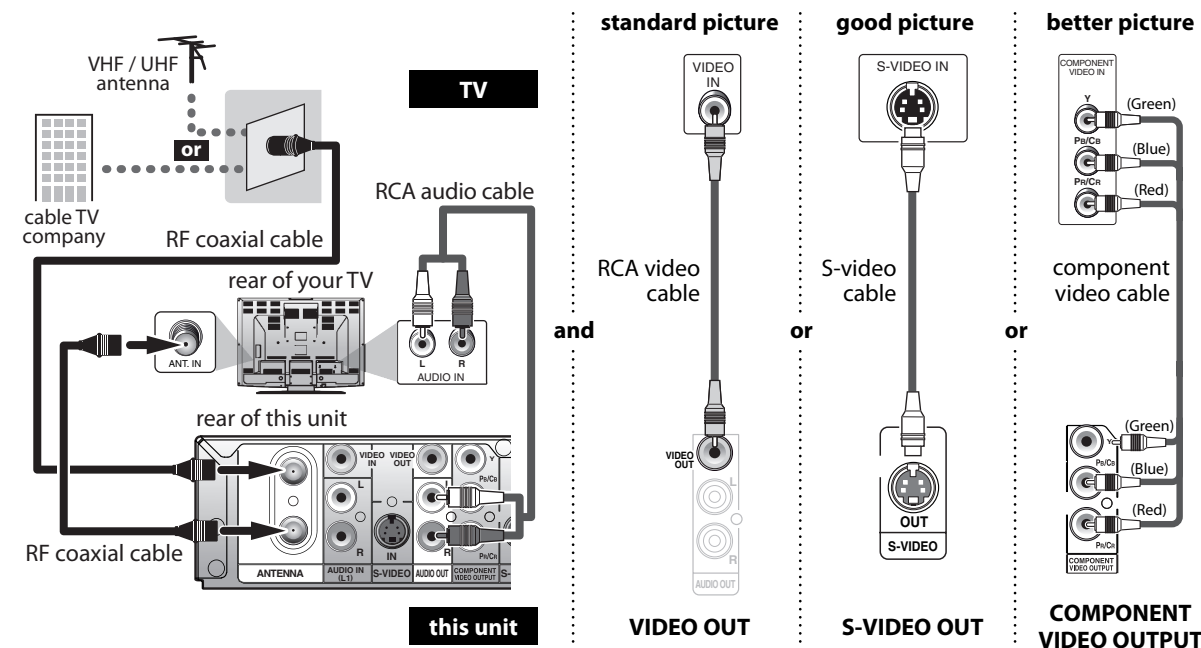
Performance of any other discs are not guaranteed.

1

Connections

Basic Connection

- 1) Disconnect the power cord of your TV from the AC outlet.
- 2) Make the basic connection as illustrated below.



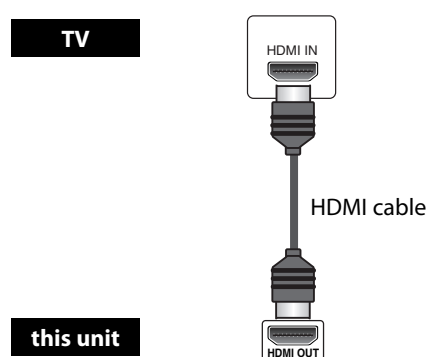
Supplied cables used in this connection are as follows:

- RCA audio cable (L/R) x 1
 - RCA video cable x 1
- Please purchase the rest of the necessary cables at your local store.

- 3) Plug in the power cords of the devices to the AC outlet.

Connection to a TV with an HDMI™ Compatible Port

A simple 1-cable connection with a device having an HDMI (high-definition multimedia interface) connector allows digital transfer of both digital video signals and multi-channel audio signals.



When connecting with an HDMI cable, the audio signal will be output as the digital audio signal simultaneously, so you do not need the analog audio connection described on page 20.

Cables not included.

Please purchase the necessary cables at your local store.

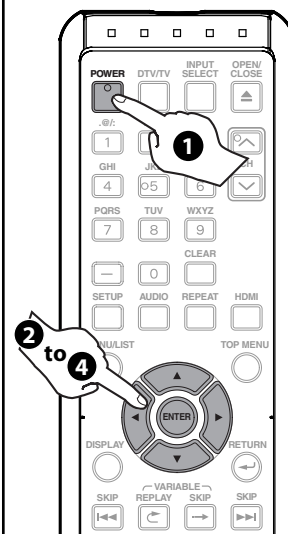
HDMI Mode and Actual Output Signals

Press [HDMI] to select the HDMI output mode. The output mode changes as follows every time [HDMI] is pressed.

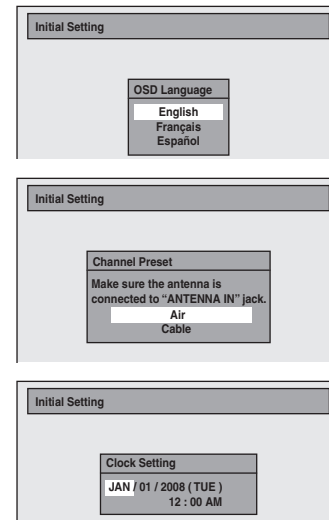
Front Panel Display	Video Output Signal
480P	480 Progressive
Press [HDMI]	↓
720P	720 Progressive
Press [HDMI]	↓
1080i	1080 interlaced
Press [HDMI]	↓
1080P	1080 Progressive
Press [HDMI]	

• The HDMI mode that is not supported by display device will be skipped.

You need to follow these steps when you turn on this unit for the first time.



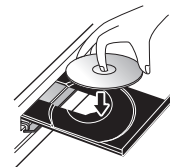
- 1 Press [POWER].**
Turn on the TV. Select the input to which the unit is connected.
- 2 Use [▲ / ▼] to select your desired language, then press [ENTER] to set language.**
- 3 Use [▲ / ▼] to select the type of broadcasting signal, then press [ENTER].**
The unit will start getting channels available in your area.
- 4 Press [ENTER], then use [◀ / ▶] to select an item to set, and use [▲ / ▼] to select the contents to suit your preference, then press [ENTER].**



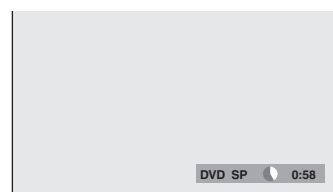
If you are recording to the HDD, press [HDD] first, then proceed to step 2. If you are recording to a disc, press [DVD] first.

- 1 Press [OPEN/CLOSE ▲] to open the disc tray. Place the disc properly. Press [OPEN/CLOSE ▲] again to close the disc tray.**

* Make sure the disc is compatible with this unit. (Refer to pages 10-11 in the owner's manual for the list of compatible discs.)



- 2 Press [REC MODE] to select a recording mode.**



Recording mode	Recording time			Video/sound quality
	8cm Disc	12cm Disc	HDD (Internal)	
XP	18 min	60 min	30 hrs	Good ↑ ↓ Poor
SP	36 min	120 min	60 hrs	
LP	72 min	240 min	120 hrs	
EP	108 min	360 min	180 hrs	
SLP	144 min	480 min	240 hrs	

- 3 Press [DTV/TV] to select analog TV or digital TV, then use [CH ▲ / ▼] or [the Number buttons] and [-] (for digital TV channels) to select a desired channel to record.**



- 4 Press [REC/OTR] to start recording.**

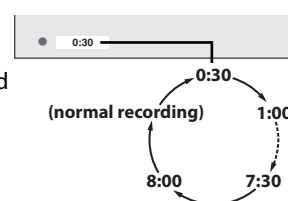
- 5 Press [STOP ■] to stop recording.**

To set one-touch timer recording (OTR)...

This is a simple way to set the recording time in blocks of 30 minutes. Press [REC/OTR] repeatedly until the desired recording time (30 minutes to 8 hours) appears on the TV screen. One-touch timer recording will start.

To change the recording length during the one-touch timer recording:
Press [REC/OTR] repeatedly until the desired length appear.

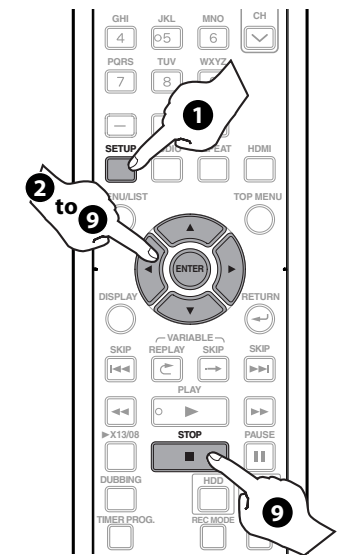
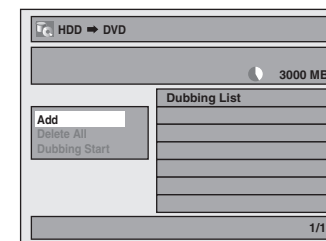
To cancel the one-touch timer recording within the specified time:
Press [STOP ■].



Preparing for dubbing (HDD to DVD):
• Insert a recordable DVD.

Preparing for dubbing (DVD to HDD):
• Insert a disc to be dubbed.

- 1 Press [SETUP] in stop mode.**
- 2 Use [▲ / ▼] to select "Dubbing", then press [ENTER].**
- 3 HDD to DVD**
Use [▲ / ▼] to select "HDD → DVD", then press [ENTER].
DVD to HDD
Use [▲ / ▼] to select "DVD → HDD", then press [ENTER].
- 4 Use [▲ / ▼] to select "Add", then press [ENTER].**

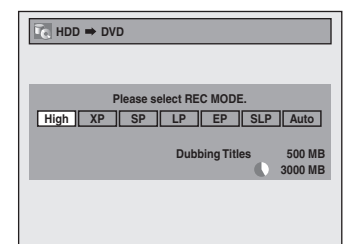


- 5 Use [▲ / ▼ / ▶ / ◀] to select a desired title, then press [ENTER].**
The title is now registered in the dubbing list.

- 6 Repeat steps 4 to 5 until you register all the titles to be dubbed.**

- 7 After adding all the titles you want, use [▲ / ▼] to select "Dubbing Start" in the dubbing menu, then press [ENTER].**

- 8 Use [◀ / ▶] to select a desired recording mode, then press [ENTER].**



- 9 Use [▲ / ▼] to select "Yes", then press [ENTER].**
Dubbing will start.
To stop the dubbing in progress, press [STOP ■] on the front panel.

One-touch Dubbing...

With one-touch dubbing, you can start dubbing right away with just one touch. To dub the contents in a DVD which is finalized on other unit, use this function.

During playback of the title you want to dub, press [DUBBING].

If you are playing back a DVD, DVD to HDD dubbing will start right away.

If you are playing back HDD, HDD to DVD dubbing will start right away.

- The dubbing will start from the beginning of the title being played back.
- The unit will dub only the title being played back.
- When dubbing from HDD to DVD or VR mode DVD-RW to HDD, recording mode will automatically be set to "High" whenever the conditions are met. (See page 58.)
- If the high speed dubbing is not available, the title will be dubbed in normal speed with the recording mode of the title.

To stop the dubbing in progress:
Press [STOP ■] on the front panel.

If you are playing back the titles in HDD, press [HDD] first, then proceed to step 2. If you are playing back the titles in disc, press [DVD] first.

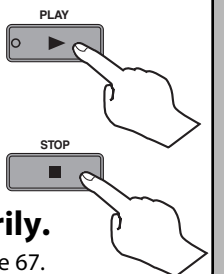
- 1 Press [OPEN/CLOSE ▲] to open the disc tray. Place the disc properly. Press [OPEN/CLOSE ▲] again to close the disc tray.**



* Make sure the disc is compatible with this unit. (Refer to pages 10-11 in the owner's manual for the list of compatible discs.)

- 2 Press [PLAY ▶] to start playback.**

- 3 Press [STOP ■] once to stop playback temporarily.**
• Refer to "Resume Playback" on page 67.



PRECAUTIONS

The model and serial numbers of this unit may be found on the cabinet.
You should record and retain those numbers for future reference.

Model No.: _____

Serial No.: _____

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE.



CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the apparatus's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the apparatus.

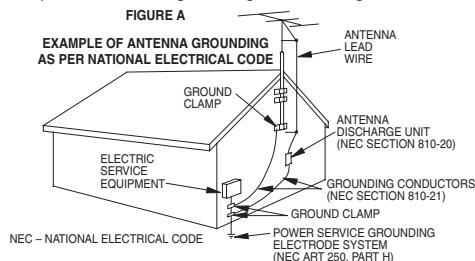
The caution marking is located on the rear or bottom of the cabinet.

Important Safeguards

- 1. READ INSTRUCTIONS** - All the safety and operating instructions should be read before the apparatus is operated.
- 2. RETAIN INSTRUCTIONS** - The safety and operating instructions should be retained for future reference.
- 3. HEED WARNINGS** - All warnings on the apparatus and in the operating instructions should be adhered to.
- 4. FOLLOW INSTRUCTIONS** - All operating and use instructions should be followed.
- 5. CLEANING** - Unplug this apparatus from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning. **EXCEPTION:** An apparatus that is meant for uninterrupted service and, that for some specific reason, such as the possibility of the loss of an authorization code for a CATV converter, is not intended to be unplugged by the user for cleaning or any other purpose, may exclude the reference to unplugging the apparatus in the cleaning description otherwise required in item 5.
- 6. ATTACHMENTS** - Do not use attachments not recommended by the apparatus manufacturer as they may cause hazards.
- 7. WATER AND MOISTURE** - Do not use this apparatus near water, for example, near a bath tub, wash bowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool, and the like.
- 8. ACCESSORIES** - Do not place this apparatus on an unstable cart, stand, tripod, bracket, or table. The apparatus may fall, causing serious injury to someone, and serious damage to the apparatus. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer, or sold with the apparatus. Any mounting of the apparatus should follow the manufacturer's instructions and should use a mounting accessory recommended by the manufacturer. An apparatus and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the apparatus and cart combination to overturn. **AMEUBLES** - Cet appareil ne doit être placé que sur un meuble (avec ou sans roulettes) recommandé par le fabricant. Si vous l'installez sur un meuble à roulettes, déplacez les deux ensembles avec précaution. Un arrêt brusque, l'utilisation d'une force excessive et des surfaces irrégulières risquent de déstabiliser l'ensemble et de le renverser.
- 9. VENTILATION** - Slots and openings in the cabinet and the back or bottom are provided for ventilation and to ensure reliable operation of the apparatus and to protect it from overheating, these openings must not be blocked or covered. The openings should never be blocked by placing the apparatus on a bed, sofa, carpet, rug, or other similar surface. This apparatus should never be placed near or over a radiator or heat register. This apparatus should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.
- 10. POWER SOURCES** - This apparatus should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your apparatus dealer or local power company. For the apparatus's intended to operate from battery power, or other sources, refer to the operating instructions.
- 11. GROUNDING OR POLARIZATION** - This apparatus is equipped with a polarized alternating-current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.
- 12. POWER-CORD PROTECTION** - Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the apparatus.
- 13. OUTDOOR ANTENNA GROUNDING** - If an outside antenna or cable system is connected to the apparatus, be sure the antenna or cable system is grounded so as to provide some protection against voltage



surges and built-up static charges. Article 810 of the National Electrical Code, ANSI/NFPA No. 70, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. (Fig. A)



- 14. LIGHTNING** - For added protection for this apparatus receiver during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the apparatus due to lightning and power-line surges.
- 15. POWER LINES** - An outside antenna system should not be located in the vicinity of overhead power lines or other electric light of power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.
- 16. OVERLOADING** - Do not overload wall outlets and extension cords as this can result in a risk of fire or electric shock.
- 17. OBJECT AND LIQUID ENTRY** - Never push objects of any kind into this apparatus through openings as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the apparatus.
- 18. SERVICING** - Do not attempt to service this apparatus yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
- 19. DAMAGE REQUIRING SERVICE** - Unplug this apparatus from the wall outlet and refer servicing to qualified service personnel under the following conditions:
 - When the power supply cord or plug is damaged or frayed.
 - If liquid has been spilled, or objects have fallen into the apparatus.
 - If the apparatus has been exposed to rain or water.
 - If the apparatus does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions, as improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the apparatus to its normal operation.
 - If the apparatus has been dropped or damaged in any way.
 - When the apparatus exhibits a distinct change in performance, this indicates a need for service.
- 20. REPLACEMENT PARTS** - When replacement parts are required, be sure the service technician uses replacement parts specified by the manufacturer that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, injury to persons or other hazards.
- 21. SAFETY CHECK** - Upon completion of any service or repairs to this apparatus, ask the service technician to perform routine safety checks to determine that the apparatus is in proper operating condition.
- 22. HEAT** - This apparatus should be situated away from heat sources such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat.

PRECAUTIONS

Do not place the unit on the furniture that is capable of being tilted by a child and an adult leaning, pulling, standing or climbing on it. A falling unit can cause serious injury or even death.

CAUTION: To prevent electric shock, match wide blade of plug to wide slot, fully insert.

ATTENTION: Pour éviter les chocs électriques, introduire la lame la plus large de la fiche dans la borne correspondante de la prise et pousser jusqu'au fond.

FCC WARNING

This apparatus may generate or use radio frequency energy. Changes or modifications to this apparatus may cause harmful interference unless the modifications are expressly approved in the manual. The user could lose the authority to operate this apparatus if an unauthorized change or modification is made.

RADIO-TV INTERFERENCE

This apparatus has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This apparatus generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this apparatus does cause harmful interference to radio or television reception, which can be determined by turning the apparatus off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- 1) Reorient or relocate the receiving antenna.
- 2) Increase the separation between the apparatus and receiver.
- 3) Connect the apparatus into an outlet on a circuit different from that to which the receiver is connected.
- 4) Consult the dealer or an experienced radio/TV technician for help.

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

LASER SAFETY

This apparatus employs a laser. Only a qualified service person should remove the cover or attempt to service this apparatus, due to possible eye injury.

CAUTION: Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

CAUTION: Visible and invisible laser radiation when open and interlock defeated. Do not stare into beam.

LOCATION: Inside, near the deck mechanism.

IMPORTANT COPYRIGHT INFORMATION

Unauthorized copying, broadcasting, public performance and lending of discs are prohibited. This product incorporates copyright protection technology that is protected by U.S. patents and other intellectual property rights. Use of this copyright protection technology must be authorized by Macrovision, and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision. Reverse engineering or disassembly is prohibited.

PRECAUTIONS

To Avoid the Hazards of Electrical Shock and Fire

- Do not handle the power cord with wet hands.
- Do not pull on the power cord when disconnecting it from an AC outlet. Grasp it by the plug.
- Do not put your fingers or objects into the unit.

Location and Handling

- Do not install the unit in direct sunlight, near strong magnetic fields, or in a place subject to dust or strong vibration.
- Avoid a place with drastic temperature changes.
- Install the unit in a horizontal and stable position. Do not place anything directly on top or bottom of the unit. Depending on your external devices, noise or disturbance of the picture and/or sound may be generated if the unit is placed too close to them. In this case, please ensure enough space between the external devices and the unit.
- Depending on the environment, the temperature of this unit may increase slightly. This is not a malfunction.

Dew Condensation Warning

- Dew condensation may form inside the unit in the following conditions. If so, do not use this unit at least for a few hours until its inside gets dry.
 - The unit is moved from a cold place to a warm place.
 - Under conditions of high humidity.
 - After heating a cold room.

Note about Recycling

- This unit's packaging materials are recyclable and can be reused. Please dispose of any materials in accordance with your local recycling regulations.
- Batteries should never be thrown away or incinerated but disposed of in accordance with your local regulations concerning chemical wastes.

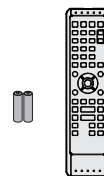


Notice for Progressive Scan Output

- Consumers should note that not all high definition television sets are fully compatible with this product and may cause artifacts to be displayed in the picture. In case of picture problems with 525(480) progressive scan output, it is recommended that the user switch the connection to the 'standard definition' output. If there are questions regarding your TV set compatibility with this 525p(480p) DVD player, please contact our customer service center.

Supplied Accessories

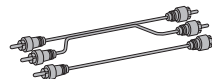
remote control (NB345UD) with batteries (AAx2)



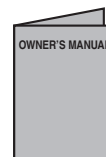
RF coaxial cable (WPZ0901TM002 / WPZ0901TM005)



RCA audio/video cables (WPZ0102TM018/WPZ0102LTE01)



owner's manual (1VMN24833)



quick guide (1VMN24834)



Maintenance

Servicing

- Please refer to relevant topics on "TROUBLESHOOTING" on pages 105-109 before returning the product.
- If this unit becomes inoperative, do not try to correct the problem by yourself. There are no user-serviceable parts inside. Turn off, unplug the power plug and please call our help line mentioned on the front page to locate an Authorized Service Center.

Cleaning the cabinet

- Use a soft cloth slightly moistened with a mild detergent solution. Do not use a solution containing alcohol, spirits, ammonia or abrasive.

Cleaning discs

- When a disc becomes dirty, clean it with a cleaning cloth. Wipe the disc from the center to out. Do not wipe in a circular motion.
- Do not use solvents such as benzene, thinner, commercially available cleaners, detergent, abrasive cleaning agents or antistatic spray intended for analog records.

Cleaning the disc lens

- If this unit still does not perform properly although you refer to the relevant sections and to "TROUBLESHOOTING" in this owner's manual, the laser optical pickup unit may be dirty. Consult your dealer or an Authorized Service Center for inspection and cleaning of the laser optical pickup unit.

Disc handling

- Handle the discs so that fingerprints and dust do not adhere to the surfaces of the discs.
- Always store the disc in its protective case when it is not used.

HDD handling

- HDD is a precision apparatus that is susceptible to vibration, strong impact or dirt. Depending on the installation environment or handling, the unit may become partially damaged or in the worst case, recording or replaying may not be available. Especially while the HDD is in motion, do not subject it to vibration or strong impact or pull out the power plug. And if a power failure occurs, the content of the recording / replaying program may be lost.
- HDD rotates at high speed when in operation. Be sure that rotation has stopped and then move the unit without subjecting it to strong impact or vibration.

IR signal check

If the remote control does not work properly, you can test if the remote control sends out the infrared signal with AM radio or a digital camera (including built-in camera of cellular phone). It will help to define the cause of malfunction.

• With an AM radio:

Tune an AM radio to a station with no broadcasting. Press a button on remote control toward the radio. Sound will be fluttering when you press any key and the radio receives the signal. This means the remote control is working.



• With a digital camera (including built-in camera of cellular phone):

Direct a digital camera to remote control, press and hold a button on remote control. If infrared light appears through digital camera, the remote control is working.



"Kodak Picture CD COMPATIBLE" is a trademark of Eastman Kodak Company.



Manufactured under license from Dolby Laboratories. Dolby and the double-D symbol are trademarks of Dolby Laboratories.

"Dolby® Digital Stereo Creator enables consumers to create stereo DVD-Videos with stunning Dolby Digital sound tracks at home. The technology, when utilized instead of PCM recording, also saves recordable disc space, allowing for higher video resolution or extended recording time on each DVD. DVDs mastered using Dolby Digital Stereo Creator will play back on all DVD-Video players." Note: This is true when the players are compatible with actual recordable DVD discs.




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LIMITED WARRANTY	Back cover
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FEATURES

This unit not only plays back DVD and CD but also offers features for you to record on HDD and DVD and edit them after that. The following features are offered with this unit.

Recording

This unit is compatible with recording on HDD, DVD-RW which are recordable repeatedly and DVD-R which accept the additional recordings until the disc becomes full but not overwritable. You can choose either one for your convenience.

HDD

DVD

Up to 36 program recording:

You can program the unit to record up to 36 programs, within one month in advance. Daily or weekly program recordings are also available.

One-touch timer recording (OTR):

You can easily set a recording time as you prefer. Every time [REC/OTR] is pressed during recording, the recording time will be increased by 30 minutes up to 8 hours. The recording automatically stops when the recording time you set is reached.

Automatic chapter mark setting:

Chapter marks will be put on recordings as you set before attempting to record.

Automatic playlist making:

The unit creates a playlist automatically after recording.

Left channel stereo recording:

This unit can record the sound of the left channel monaural input as left and right channels automatically (the input from the L2 jacks only).

HDD

Autostart recording:

Every time you turn on this unit, this unit automatically records the channel currently viewed and temporarily stores the recorded content to the HDD. By using this function, you can pause or go back the TV program you are currently watching, and you can also start recording the whole TV program even at the middle of the TV program.

DVD

Automatic title menu making:

The unit creates title menu automatically when finalizing discs.

Automatic title finalizing:

You can finalize discs automatically after finishing all timer recordings or at the end of the disc space if you set this in the main menu.

Alternate recording:

If there is no recordable disc in the unit, if the disc does not have enough space to complete the recording, or if the material is "copy-once" program and prohibited to be recorded on a DVD in the unit, the unit will detect it and automatically record to the HDD even when DVD is selected as the recording media.

This feature is available only for timer recording. Not available for one-touch timer recording.

Dubbing

With this unit, you can enjoy bi-directional dubbing between HDD and DVD.

HDD

DVD

High speed dubbing:

With this function you can dub a title much faster than the normal speed dubbing without changing the quality of the picture and sound.

Auto recording mode dubbing:

When dubbing, if you set the recording mode to "Auto", the recording mode will automatically be adjusted so the titles will fit nicely in the remaining space of the disc.

DV dubbing:

This function helps you to easily dub the contents of the DVC (digital video camcorder) to HDD/DVD.

Playback

HDD

DVD

Theater surround sound in your home:

When connecting the unit to an amplifier or a decoder which is compatible with Dolby Digital, you can experience the theater surround sound from discs with surround sound system.

Quick search for what you want to watch:

You can easily find the part you want to watch using the search function. Search for a desired point on a disc by title, chapter/track or time.

Variable skip:

You can skip forward a certain time, which is specified in "Playback" menu in advance, with one-touch while playback.

Variable replay:

You can skip back a certain time, which is specified in "Playback" menu in advance, with one-touch while playback.

Virtual surround system:

You can enjoy stereophonic space through your existing 2 channel stereo system.

HDD

Chasing playback during recording and simultaneous playback and recording:

You can play back the already recorded part of the current recording or another title during recording.

DVD

Playing back MP3/JPEG/Kodak Picture CD files:

You can enjoy MP3/JPEG/Kodak Picture CD files which are recorded on CD-RW/-R.

Editing

Deleting titles:

You can delete titles which you do not need anymore.

Setting or clearing chapter marks:

You can set or clear chapter marks on titles.

Deleting parts of titles:

You can delete a specific part of a title.

Dividing or combining titles:

You can divide or combine a title.

Editing title names:

You can change the title name you prefer.

Compatibility

Available for playing back discs on a regular DVD player:

Recorded discs can be played back on regular DVD players, including computer DVD drives compatible with DVD-video playback.

Others

Progressive scan system









Unlike conventional interlace scanning, the progressive scan system provides less flickering and images in higher resolution than that of traditional television signals.

HDMI (High-Definition Multimedia Interface)

You can enjoy clearer audio/video output when connecting this unit to a display device with an HDMI-compatible port.






Symbols Used in this Owner's Manual

To specify for what disc type each function is, we put the following symbols at the beginning of each item to operate.

Symbol	Description
For Recording, Playing Back, and Editing	
	Description refers to (internal) HDD
	Description refers to DVD-RW in video mode
	Description refers to DVD-RW in VR mode
	Description refers to DVD-R in video mode
For Playback only	
	Description refers to DVD-video
	Description refers to audio CD
	Description refers to CD-RW/-R with MP3 files
	Description refers to CD-RW/-R with JPEG files (Kodak Picture CD files included)

If you do not find any of the symbols listed above under the function heading, the operation is applicable to all media.











FEATURES

		Discs for Recording, Playing back					
Disc type		DVD-RW		DVD-R	HDD		
Logo					<i>HDD</i>		
Format		Can be formatted in VR or video mode		Automatically formatted in video mode	—		
Icon	Video Mode		VR Mode				
	Maximum record time	480 min (12cm) 144 min (8cm)	480 min (12cm) 144 min (8cm)			480 min (12cm) 144 min (8cm)	240 hrs (with SLP mode)
Recordable/playable versions		Ver.1.1,1.2 Ver.1.1/2× CPRM compatible Ver.1.2/4× CPRM compatible		Ver.2.0 Ver.2.0/4× Ver.2.0/8× Ver2.0/16×	—		
Compatibility		Playable on most DVD players. Finalization necessary. (title menu will be created)	Playable only on VR mode compatible unit. Finalization recommended.	Playable on most DVD players. Finalization necessary. (title menu will be created)	—		
Available Features	Recording Features						
	Record TV programs	✓	✓	✓	✓		
	Reuse by deleting the current contents	✓	✓		✓		
	Record 16:9 size pictures	✓	✓	✓	✓		
	Record copy-once programs		✓*		✓		
	Create chapters at fixed intervals (auto chapter)	✓	✓	✓	✓		
	Editing Features		Playlist	Original	Playlist	Original	
	Scene delete		✓	✓		✓	✓
	Edit title name	✓	✓	✓	✓	✓	✓
	Create chapters wherever you like (chapter mark)		✓	✓		✓	✓
	Divide a title		✓			✓	✓
	Combine titles		✓			✓	
	Delete a title	✓	✓	✓	✓	✓	✓
	Deleting selected titles					✓	✓
	Create a playlist			✓			✓
	Protect a title			✓			✓



✓: Available Gray: Not available

*CPRM compatible disc only.

Discs for playing back

Disc Type	DVD-VIDEO	CD-DA	CD-RW	CD-R
Logo			 	 
Icon				

Files for playing back

Type of title	MP3	JPEG
Icon		
Media	CD-RW/-R	CD-RW/-R

DVD is a trademark of DVD Format/Logo Licensing Corporation.

Unplayable Discs

The following discs will not play back on this unit.

- CD-ROM
- Compact Disc-Interactive (CD-I)
- Video Single Disc (VSD)
- DVD-ROM
- DVD-audio
- Unfinalized disc
- DVD contains MP3 or JPEG files
- DVD-RW/-R recorded in non compatible recording format
- Blu-ray Disc
- HD DVD
- Super Video CD

On the following disc, the sound may not be heard.

- Super audio CD - Only the sound on the CD layer can be heard. The sound on the high-density super audio CD layer cannot be heard.

Color Systems

DVD is recorded in different color systems throughout the world. The most common color system is NTSC (which is used primarily in the United States and Canada). This unit uses NTSC, so DVD you play back must be recorded in the NTSC system. You cannot play back DVD recorded in other color systems.

Region Codes

This unit has been designed to play back DVD with region 1. DVD must be labeled for ALL regions or for region 1 in order to play back on the unit. You cannot play back DVD that are labeled for other regions. Look for the symbols on the right on your DVD. If these region symbols do not appear on your DVD, you cannot play back the DVD in this unit.



The number inside the globe refers to region of the world. A DVD labeled for a specific region can only play back on the unit with the same region code.

Following discs are recommended for good recording quality and are proven to be compatible with this unit. However, depending on the media condition, the unit may not read the disc properly.

Verbatim DVD-R 8x, DVD-RW 2x

JVC DVD-RW 4x

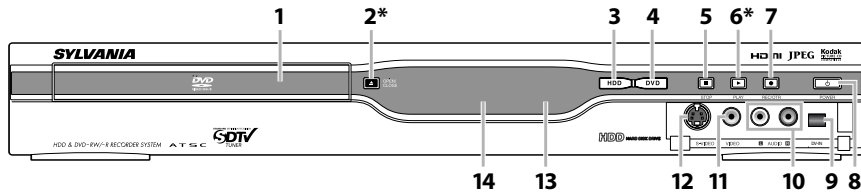
Maxell DVD-R 8x/16x

Performance of any other discs are not guaranteed.

DVD players with **RW COMPATIBLE** are capable of playing DVD-RW recorded in VR mode.

FUNCTIONAL OVERVIEW

Front Panel



(*) The unit can also be turned on by pressing these buttons.

1. Disc tray

Place a disc when the disc tray is opened.

2. **▲ OPEN/CLOSE button***

Press to open or close the disc tray.

3. HDD button

Press to select the HDD output mode.

4. DVD button

Press to select the DVD output mode.

5. **■ STOP button**

Press to stop playback or recording.

6. **▶ PLAY button***

Press to start or resume playback.

7. **● REC/OTR button**

Press once to start a recording. Press repeatedly to start one-touch timer recording.

8. **⏻ POWER button**

Press to turn the unit on and off.

9. DV-IN jack (L3)

Use to connect the DV output of external device with a DV cable.

10. AUDIO input jacks (L2)

Use to connect external device with an RCA audio cable.

11. VIDEO input jack (L2)

Use to connect external device with an RCA video cable.

12. S-VIDEO input jack (L2)

Use to connect the S-video output of external device with an S-video cable.

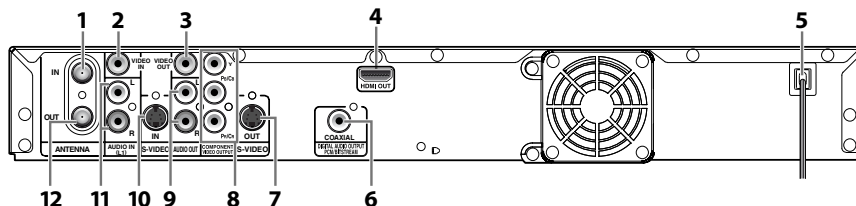
13. Infrared sensor window

Receive signals from your remote control so that you can control the unit from a distance.

14. Display

Refer to "Front Panel Display" on page 16.

Rear Panel



1. ANTENNA IN jack

Use to connect an antenna.

2. VIDEO IN jack (L1)

Use to connect external device with an RCA video cable.

3. VIDEO OUT jack

Use to connect a TV monitor, AV receiver or other device with an RCA video cable.

4. HDMI OUT jack

Use an HDMI cable to connect to a display with an HDMI compatible port.

5. AC Power Cord

Connect to a standard AC outlet to supply power to this unit.

6. COAXIAL DIGITAL AUDIO OUTPUT jack

Use to connect an AV receiver, Dolby Digital decoder, or other device with a digital audio coaxial input jack with a digital audio coaxial cable.

7. S-VIDEO OUT jack

Use to connect the S-video input of a TV monitor, AV receiver or other device with an S-video cable.

8. COMPONENT VIDEO OUTPUT jacks

Use to connect a TV monitor with component video inputs with a component video cable.

9. AUDIO OUT jacks

Use to connect a TV monitor, AV receiver or other device with an RCA audio cable.

10. S-VIDEO IN jack (L1)

Use to connect the S-video output of external device with an S-video cable.

11. AUDIO IN jacks (L1)

Use to connect external device with an RCA audio cable.

12. ANTENNA OUT jack

Use to connect an RF coaxial cable to pass the signal from the ANTENNA IN to your TV.

Note

- Do not touch the inner pins of the jacks on the rear panel. Electrostatic discharge may cause permanent damage to the unit.
- This unit does not have the RF modulator.

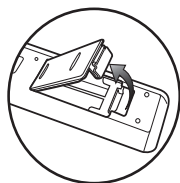
FUNCTIONAL OVERVIEW

Remote Control

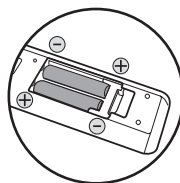
Installing the Batteries in the Remote Control

Install the batteries (AAx2) matching the polarity indicated inside battery compartment of the remote control.

1 Open the cover.

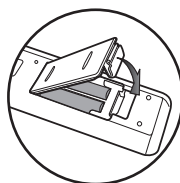


2 Insert batteries.



Make sure to match + and - on the batteries to the marks indicated in the battery compartment.

3 Close the cover.



Caution:

Never throw batteries into a fire.

Note:

- Be sure to use AA size batteries.
- Dispose of batteries in a designated disposal area.
- Batteries should always be disposed of with the environment in mind. Always dispose of batteries in accordance with applicable laws and regulations.
- If the remote control does not operate correctly, or if the operating range becomes reduced, replace batteries with new ones.
- When necessary to replace batteries in the remote control, always replace both batteries with new ones. Never mix battery types or use new and used batteries in combination.
- Always remove batteries from remote control if they are dead or if the remote control is not to be used for an extended period of time. This will prevent battery acid from leaking into the battery compartment.

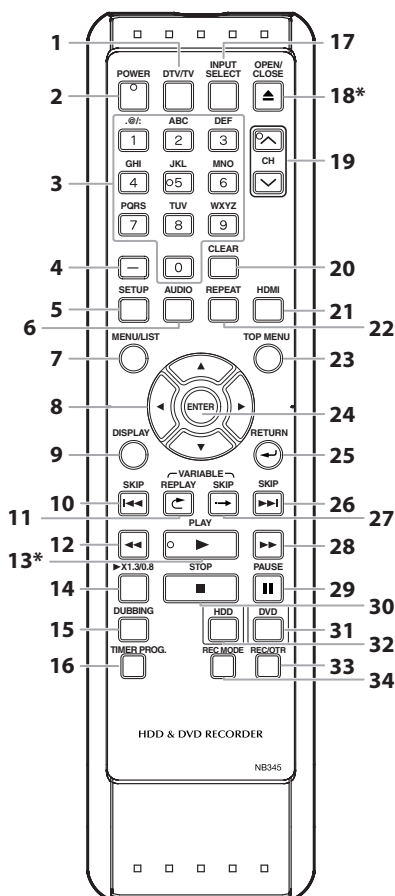
Using a Remote Control

Keep in mind the followings when using the remote control:

- Make sure that there are no obstacles between the remote control and the infrared sensor window on the unit.
- Remote operation may become unreliable if strong sunlight or fluorescent light is shining on the infrared sensor window of the unit.
- Remote control for different devices can interfere with each other. Avoid using remote control for other device located close to the unit.
- Replace the batteries when you notice a fall off in the operating range of the remote control.
- The maximum operable ranges from the unit are as follows.
 - **Line of sight:** approx. 23 feet (7m)
 - **Either side of the center:** approx. 16 feet (5m) within 30°
 - **Above:** approx. 16 feet (5m) within 15°
 - **Below:** approx. 10 feet (3m) within 30°



16feet (5m) 23feet (7m) 16feet (5m)



(*) The unit can also be turned on by pressing these buttons.

1. DTV/TV button

Press to switch between digital TV (DTV) mode and analog TV (TV) mode.

2. POWER button

Press to turn the unit on and off.

3. Number/Character buttons

- Press to select channel numbers.
- Press to select a title/chapter/track/file on display.
- Press to enter values for the settings in the main menu.
- Press to enter title names.

4. Confirm (–) button

Analog mode:

Press to confirm the channel selection made by [the Number buttons].

Digital mode:

Press to confirm the major / minor channel selection made by [the Number buttons].

5. SETUP button

- Press to display the main menu.
- During HDD or DVD playback, press and hold for more than 3 seconds to switch the progressive scanning mode to the interlace mode.

6. AUDIO button

- Press to switch the audio language for digital TV.
- Press to display the audio menu during playback.

7. MENU/LIST button

Press to display the disc menu. To change original and playlist on the TV screen.

8. Cursor ▲ / ▼ / ◀ / ▶ buttons

Press to select items or settings.

9. DISPLAY button

Press to display the display menu on or off.

10. SKIP ◀◀ button

- During playback, press to return to the beginning of the current chapter, track or file.
- When playback is in pause, press repeatedly to reverse the playback step by step.

11. VARIABLE REPLAY ◀ button

Press to replay by the amount of time set in advance.

12. REV ◀◀ button

- During playback, press to fast reverse playback.
- When playback is in pause, press to slow reverse playback.

13. PLAY ▶ button*

Press to start playback or resume playback.

14. ▶x1.3/0.8 button

During playback, press to play back in a slightly faster/slower while keeping the sound output.

15. DUBBING button

- During playback, press to start dubbing right away.
- In stop mode, press to display "Dubbing" menu.

16. TIMER PROG. button

Press to display the timer programming list.

17. INPUT SELECT button

Press to select the appropriate input.

18. OPEN/CLOSE ▲ button*

Press to open or close the disc tray.

19. CH ▲ / ▼ buttons

Press to change the channel up and down.

20. CLEAR button

Press to clear the password once entered, to clear the marker settings or to cancel the programming for CD, etc.

21. HDMI button

Press to set the HDMI connector's video signal output mode .

22. REPEAT button

Press to display the repeat menu.

23. TOP MENU button

Press to display the title list.

24. ENTER button

Press to confirm or select menu items.

25. RETURN ↶ button

Press to return to the previous displayed menu screen.

26. SKIP ▶▶ button

- During playback, press to skip to the next chapter, track or file.
- When playback is in pause, press repeatedly to forward the playback step by step.

27. VARIABLE SKIP → button

Press to skip by the amount of time set in advance.

28. FWD ▶▶ button

- During playback, press to fast forward playback.
- When playback is in pause, press to slow forward playback.

29. PAUSE || button

Press to pause playback or recording.

30. STOP ■ button

- Press to stop playback or recording.
- Press to exit from the title list.

31. DVD button

Press to activate DVD.

32. HDD button

Press to activate HDD.

33. REC/OTR button

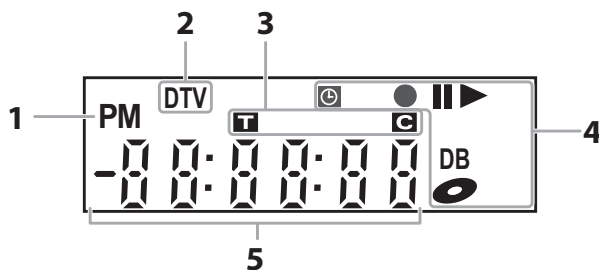
- Press once to start a recording.
- Press repeatedly to start the one-touch timer recording.

34. REC MODE button

Press to switch the recording mode.

FUNCTIONAL OVERVIEW

Front Panel Display



1.

PM : Appears in the afternoon with the clock display.

2.

DTV : Appears when the channel is in DTV mode.

3. Title / track and chapter mark

T : Appears when indicating a title / track number.

C : Appears when indicating a chapter number.

4. Current status of the unit

|| : Appears when playback is paused.

▶ : Appears when playing back an HDD or a disc.

⏻ : Appears when the timer programming or OTR has been set and is proceeding.
: Flashes when timer programming was not executed because of some error.

● : Appears during recording process.

: Flashes when a recording pauses.

Ⓢ : Appears when a disc is in this unit.

DB : Appears during dubbing.

5. Displays the following

- Elapsed playback time
- Current title / chapter / track number
- Recording time / remaining time
- Clock
- Channel number
- Remaining time for one-touch timer recording
- Selected HDMI output mode

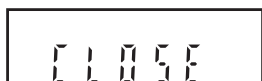
Display Message



Appears when the disc tray is opening.



Appears when HDMI output mode (480p) is selected.



Appears when the disc tray is closing.



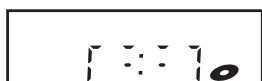
Appears when HDMI output mode (720p) is selected.



Appears when a disc is loaded on the disc tray.



Appears when HDMI output mode (1080i) is selected.



Appears when data is being recorded on a disc.

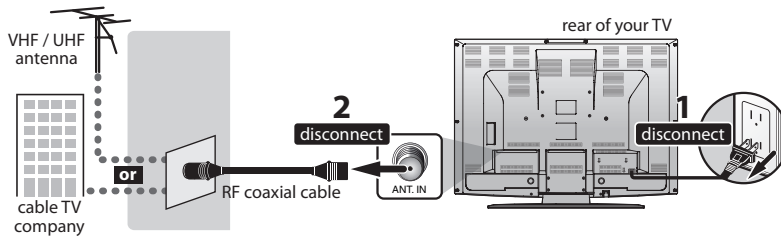


Appears when HDMI output mode (1080p) is selected.

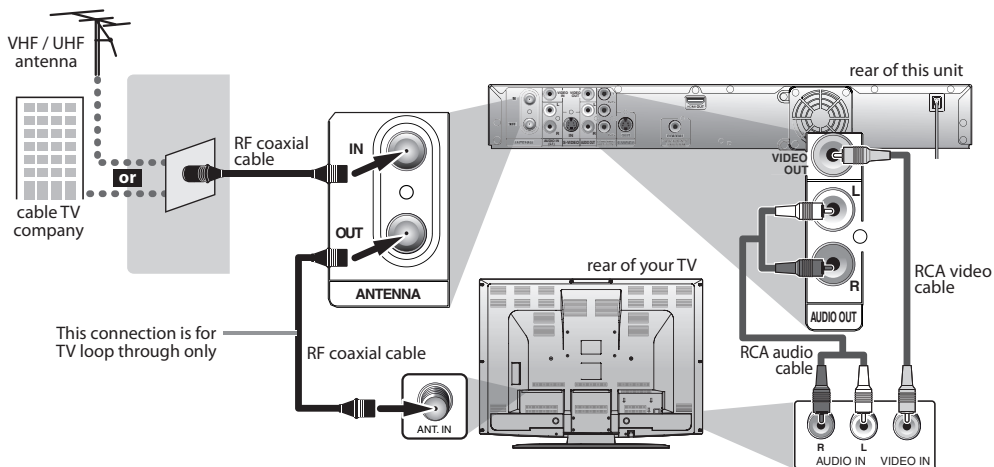
ANTENNA CABLE CONNECTION

This section describes how to connect your unit to an antenna, cable box, etc.

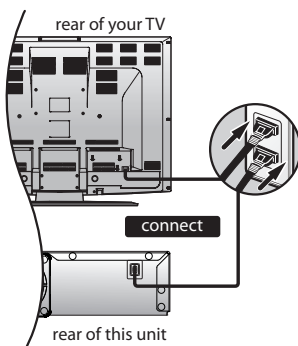
- 1 Disconnect the power cord of your TV from the AC outlet.**
- 2 Disconnect RF coaxial cable from antenna input jack of your TV.**



- 3 Connect cables to the unit.**
Make the basic connection as illustrated below.



- 4 Plug in the power cord of this unit and your TV to the AC outlet.**



Supplied cables used in this connection are as follows:

- RF coaxial cable x 1
 - RCA audio cable (L/R) x 1
 - RCA video cable x 1
- Please purchase the rest of the necessary cables at your local store.

*Once connections are completed, turn on the TV and initial setting begin.
Channel scanning is necessary for the unit to memorize all available channels in your area.
(Refer to "INITIAL SETTING" on page 27.)

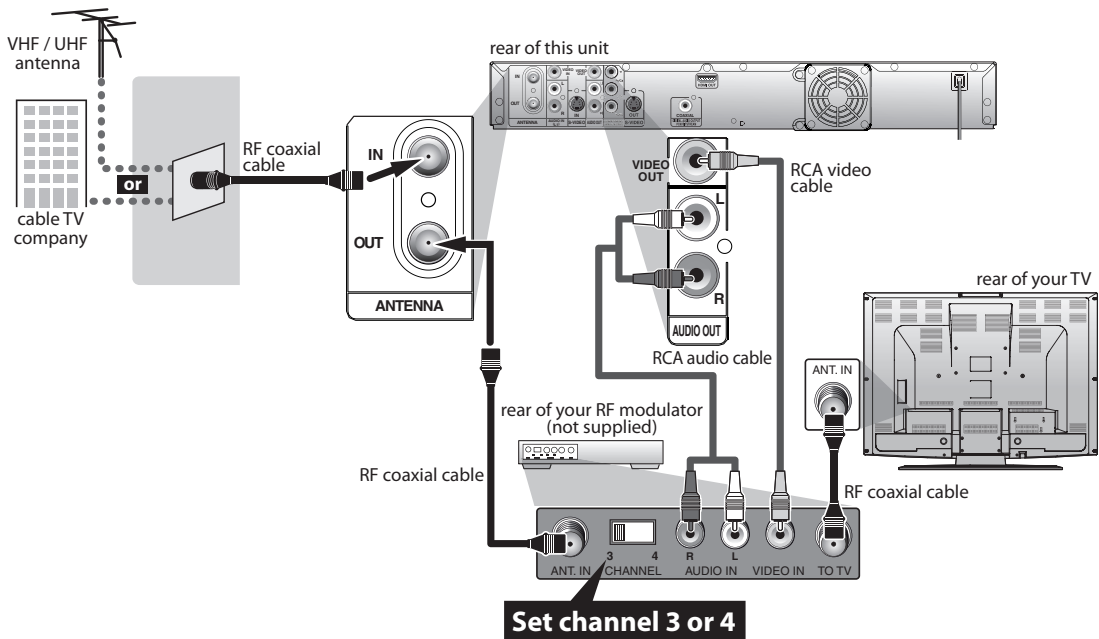
Note

- For your safety and to avoid damage to the device, please unplug the RF coaxial cable from the ANTENNA IN jack before moving the unit.
- If you use an antenna to receive analog TV, it should also work for DTV reception. Outdoor or attic antennas will be more effective than set-top versions.
- RF output is for tuner pass through only. HDD/DVD playback through the RF is not possible.

RF MODULATOR CONNECTION

If your TV has antenna in jack only, it is still possible to connect this unit to your TV by using a stereo audio/video RF modulator. In this case, follow the instructions below.

- 1) Disconnect the power cords of the devices from the AC outlet.
- 2) Make the connection as illustrated below.
- 3) **Set your RF modulator's channel 3/4 switch to either 3 or 4**, whichever the TV channel is least used in your area.
If your RF modulator has a Modulator/Antenna switch, set it according to the manual supplied with the RF modulator.
- 4) Plug in the power cords of the devices to the AC outlet.
- 5) **Turn on your TV and choose the same channel as you set the RF modulator's channel 3/4 switch.**
For more details, follow the manual supplied with the RF modulator.



Supplied cables used in this connection are as follows:

- RF coaxial cable x 1
- RCA audio cable (L/R) x 1
- RCA video cable x 1

Please purchase the rest of the necessary cables at your local store.

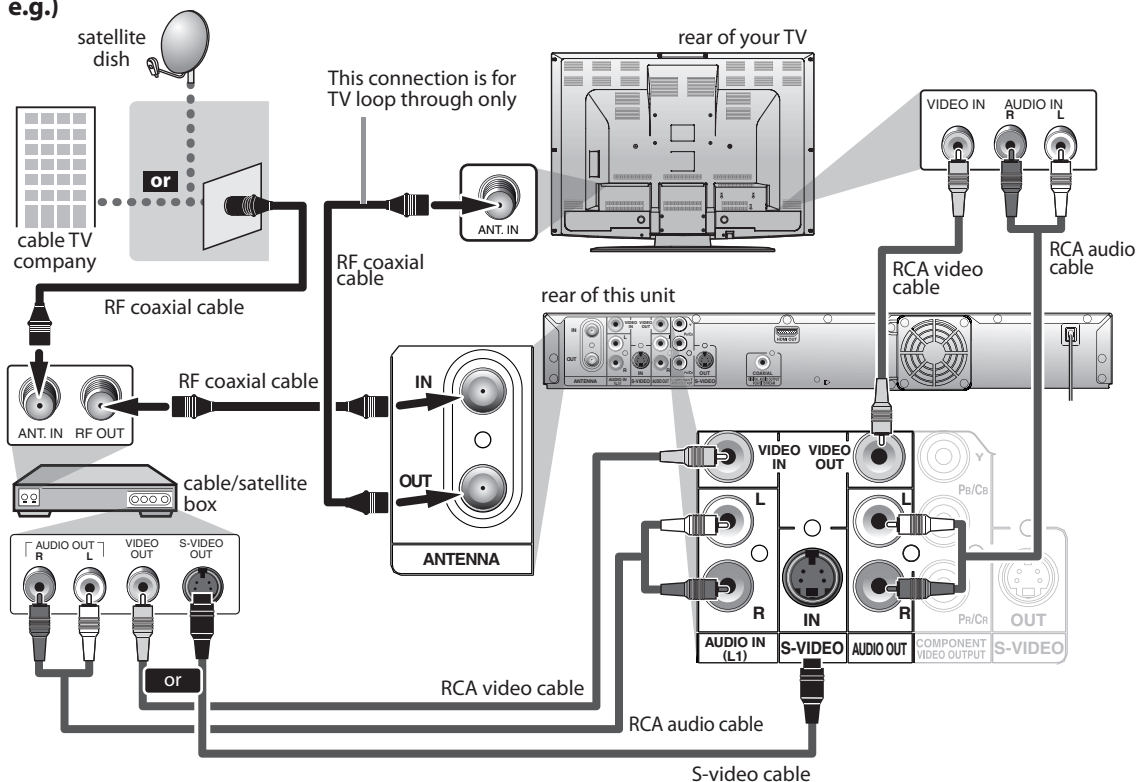
Note

- The quality of picture may become poor if this unit is connected to an RF modulator.

CONNECTION TO A CABLE / SATELLITE BOX

- 1) Disconnect the power cords of the devices from the AC outlet.
- 2) Make the connection as illustrated below.
- 3) Plug in the power cords of the devices to the AC outlet.

e.g.)



Supplied cables used in this connection are as follows:

- RF coaxial cable x 1
- RCA audio cable (L/R) x 1
- RCA video cable x 1

Please purchase the rest of the necessary cables at your local store.

Note

- Required cables and connecting methods differ depending on the cable/satellite box. For more information, please contact your cable/satellite provider.
- Instead of using VIDEO OUT jack of this unit, you can also use S-VIDEO OUT jack, COMPONENT VIDEO OUTPUT jacks, or HDMI OUT jack (no AUDIO OUT jack connection required) for connecting to your TV.

With this setup:

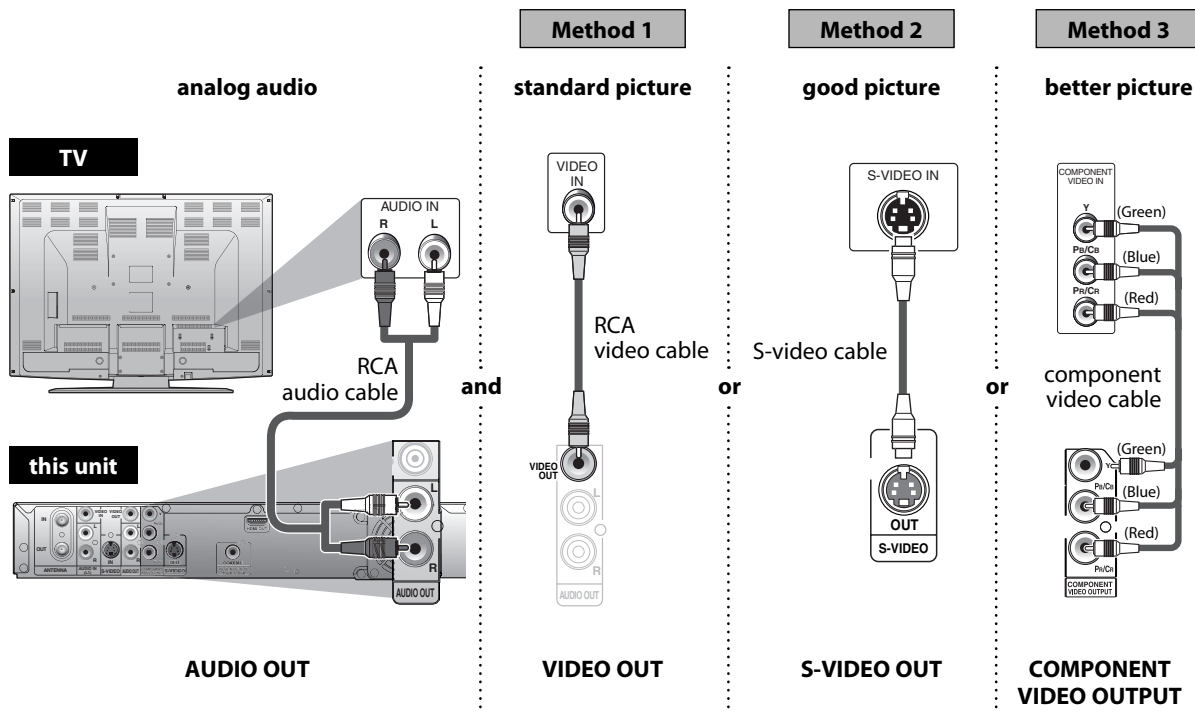
- You can record any unscrambled channel by selecting the channel on the cable/satellite box. Be sure that the cable/satellite box is turned on.
- **You cannot record one channel while watching another channel.**

Note to CATV system installer

- This reminder is provided to call the cable TV system installer's attention to Article 820-40 of the National Electrical Code, which provides guidelines for proper grounding - in particular, specifying that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as possible.

CONNECTION TO A TV

Make one of the following connections, depending on the capabilities of your display device.



Supplied cables used in this connection are as follows:

- RCA audio cable (L/R) x 1
- RCA video cable x 1

Please purchase the rest of the necessary cables at your local store.

After you have completed the connections

- Switch the input selector on your TV to an appropriate external input channel. Press a button on the TV's original remote control that selects an external input channel until the DVD recorder's opening picture appears. Check your TV owner's manual for details.

Note

- Connect this unit directly to the TV. If the RCA audio/video cables are connected to a VCR, pictures may be distorted due to the copy protection system.
- **Progressive signal does not output from the VIDEO OUT or S-VIDEO OUT jack.**

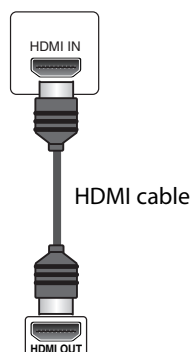
To set progressive scan mode, refer to page 102

- This unit is compatible with the progressive scan system. The feature provides you the higher quality images than the traditional output system. To utilize this feature, you must set "Progressive" to "ON".

CONNECTION TO A TV WITH AN HDMI™ COMPATIBLE PORT

A simple 1-cable connection with a device having an HDMI (high-definition multimedia interface) connector allows digital transfer of both digital video signals and multi-channel audio signals.

TV



this unit

When connecting with an HDMI cable, the audio signal will be output as the digital audio signal simultaneously, so you do not need the analog audio connection described on page 20.

Cables not included.

Please purchase the necessary cables at your local store.

HDMI Mode and Actual Output Signals

Press **[HDMI]** to select the HDMI output mode. The output mode changes as follows every time **[HDMI]** is pressed.

Front Panel Display	Video Output Signal
480P	480 Progressive
Press [HDMI]	↓
720P	720 Progressive
Press [HDMI]	↓
1080i	1080 interlaced
Press [HDMI]	↓
1080P	1080 Progressive
Press [HDMI]	

- The HDMI mode that is not supported by display device will be skipped.

Actual Output Modes by Media

Audio recording format of the disc		Dolby Digital setting of this unit	Actual output
DVD-video	Dolby Digital	PCM	2channel PCM
		Stream	Dolby Digital
	LPCM	PCM	2channel PCM
		Stream	

For audio CD and MP3 files, 2 channel PCM will be output regardless of the "Dolby Digital" setting.

If the connected device is not compatible with HDMI BITSTREAM, audio will be output as PCM even if you select "Stream" in "Dolby Digital" setting (Refer to page 97).

Copyright protection system

To play back the digital video images of a DVD via an HDMI connection, it is necessary that both the player and the display device (or an AV amplifier) support a copyright protection system called HDCP (high-bandwidth digital content protection system). HDCP is copy protection technology that comprises data encryption and authentication of the connected AV device. This unit supports HDCP. Please read the operating instructions of your display device (or AV amplifier) for more information.

*HDMI: High Definition Multimedia Interface

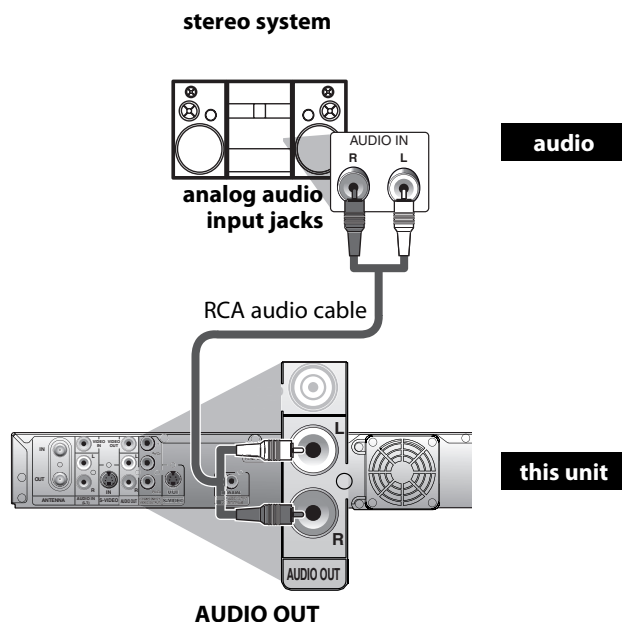
Note

- Because HDMI is an evolving technology, it is possible that some devices with an HDMI input may not operate properly with this unit.
- When using an HDCP-incompatible display device, the image will not be viewed properly.
- Among the devices that support HDMI, some devices can control other devices via the HDMI connector; however, this unit cannot be controlled by another device via the HDMI connector.
- The audio signals from the HDMI connector (including the sampling frequency, the number of channels and bit length) maybe limited by the device that is connected.
- Among the monitors that support HDMI, some do not support audio output (for example, projectors). In connections with device such as this unit, audio signals are not output from the HDMI output connector.
- When this unit's HDMI connector is connected to a DVI-D compatible monitor (HDCP compatible) with an HDMI-DVI converter cable, the signals are output in digital RGB.
- When the power failure occurs, or when you unplug the unit, some problems in the HDMI setting might occur. Please check and set the HDMI setting again.

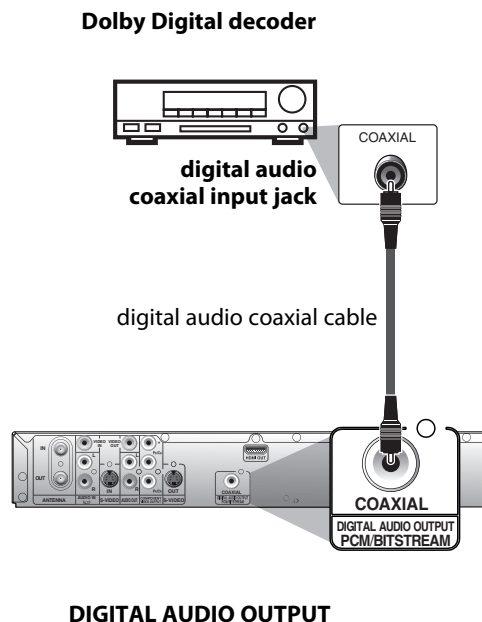
CONNECTION TO AN AUDIO SYSTEM

- When you change the connections, all devices should be turned off.
- Refer to the owner's manual accompanying external devices for more information.

Playing Back 2 Channel Analog Audio



Playing Back Multi Channel Digital Audio



*MD deck or DAT deck can be also connected through coaxial jack.

Supplied cables used in this connection are as follows:

- RCA audio cable (L/R) x 1
- Please purchase the rest of the necessary cables at your local store.

Multi Channel Digital Audio Setting

Connection	Setting	Setup >General Setting >Playback >Audio Out >
		Dolby Digital
If output is Dolby Digital encoded audio, connect to a Dolby Digital decoder.		Stream
Connecting to an MD deck or DAT deck.		PCM
If not connected to any external devices.		PCM

* To complete these settings, refer to page 97.

Note

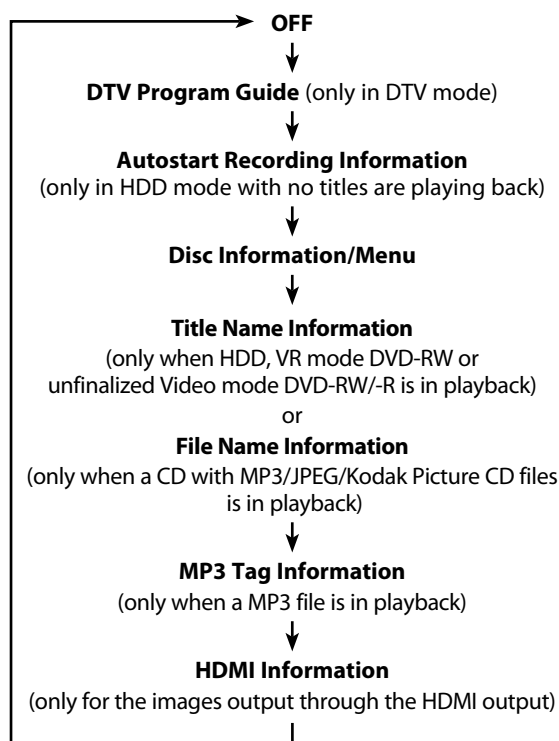
- The audio source on a disc in a Dolby Digital multi channel surround format cannot be recorded as digital sound by an MD or DAT deck.
- By connecting this unit to a Dolby Digital decoder, you can enjoy high-quality Dolby Digital multi channel surround sound as heard in the movie theaters.
- Playing back a HDD/DVD using incorrect settings may generate noise distortion and may also damage the speakers.

BEFORE YOU START

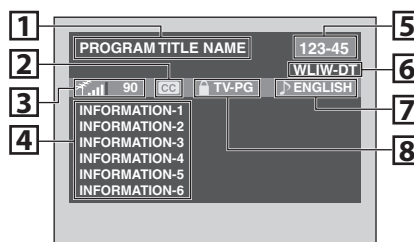
This unit uses the following on-screen displays and menus to guide you to the easy operations. The on-screen displays give you the information on the loaded disc, the disc/file in playback, or the HDMI status, etc. The menus allow you to change the various kinds of settings for playing back, recording, or editing to suite your preference.

Guide to On-Screen Displays and Menus

The on-screen display changes in the following order as you press [DISPLAY].



DTV Program Guide

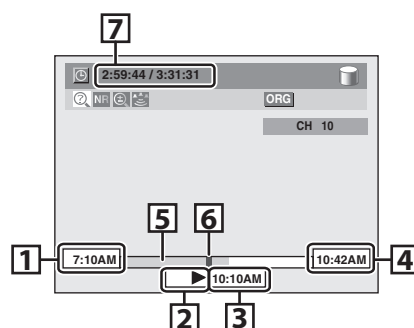


1. Program title (max. 2 lines displayed)
2. Closed Caption (Indicates that the program being broadcast is available with closed captioning.)
3. Signal strength (Indicates the signal strength of the current channel.)
4. Program guide (max. 6 lines displayed)
5. Channel number
6. Broadcast station
7. Audio language ("Other" is displayed when the audio language cannot be acquired, or the acquired languages are other than English, Spanish or French.)
8. Program rating

Note

- When the program guide is displayed in more than 6 lines, use [▲ / ▼] to scroll.
- "No description provided." is displayed when the program guide is not provided.

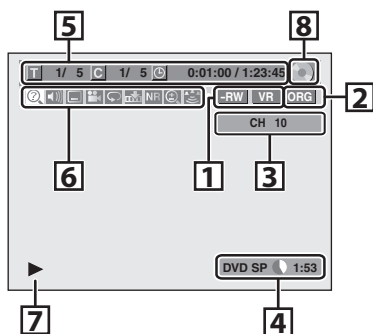
Autostart Recording Information



1. Starting time of the autostart recording
2. Status of the time autostart recording
Live: Indicates when watching live TV
▶ : Indicates when playing back the autostart recording.
3. The time that the picture currently displayed on the screen is broadcasted
4. Current time
5. The progress of the autostart recording
6. Current point of the playback of the autostart recording
7. Elapsed time of the playback of the autostart recording / total time of the autostart recording

BEFORE YOU START

Disc Information / Menu



* This is an example screen only for explanation.

1. Indicates a disc type and format mode.
2. Indicates a type of titles for VR mode DVD-RW .
3. Indicates a channel number or selected external input mode.
4. Indicates a recording mode and possible recording time left.
5. Indicates a title number, chapter number, elapsed time and total time of disc playback.
6. Each icon means:

- : Search
- : Audio
- : Subtitle
- : Angle
- : Repeat
- : Marker
- : Noise Reduction
- : Zoom
- : Surround

7. Indicates an operation status.
8. Indicates the component in use.

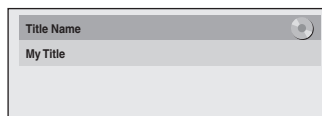
- : HDD
- : DVD

Note

- In some descriptions on this manual, only one disc type is indicated as an example.

Title/File Name Information

Title name information

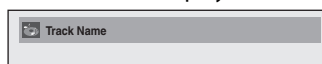


File name information



MP3 Tag Information

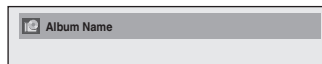
1. Indicates artist/track information
 - First, track name will be displayed.



- If you press **[DISPLAY]** one more time, artist name will be displayed.

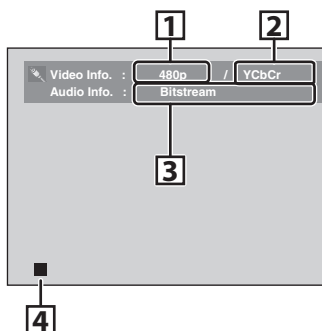


- If you press **[DISPLAY]** one more time, album name will be displayed.



- If there is no artist, track or album name, "Not Available" will be displayed.

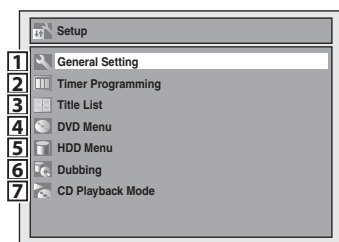
HDMI Information



- *1. Indicates the resolution of the HDMI output image.
- *2. Indicates the HDMI video format.
- *3. Indicates the HDMI audio format.
- *4. Indicates current disc status.
- * " - - " will be displayed, when it does not have any information.

Main Menu

Press **[SETUP]** to display the main menu. Then use **[▲ / ▼]** to select a menu and press **[ENTER]** to display the menu. These menus provide entries to all main functions of the unit.



1. General Setting:

To go to general setting menu.

2. Timer Programming:

To program a timer recording.

3. Title List:

To call up the title list.

4. DVD Menu:

To set up the DVD setting.

5. HDD Menu:

To set up the HDD setting.

6. Dubbing:

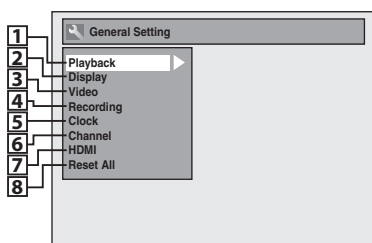
- To dub the content of the HDD to DVD or vice versa.
- "Dubbing" is available only when a recordable disc is loaded.

7. CD Playback Mode:

To set up the CD playback setting.

- "CD Playback Mode" is available only when an audio CD, a CD-RW/-R with MP3/JPEG/Kodak Picture CD files is inserted into the unit.

General Setting



1. Playback:

To set up the unit to play back discs as you prefer.

2. Display:

To set up the OSD screen as you prefer.

3. Video:

To set up the video setting.

4. Recording:

To set up the unit to record to discs as you prefer.

5. Clock:

To set up the clock of the unit as you need.

6. Channel:

To adjust the channel setting of the unit as you prefer.

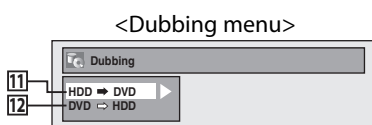
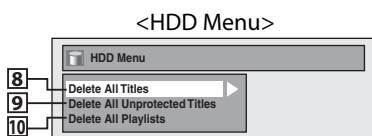
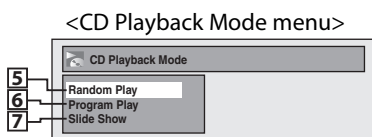
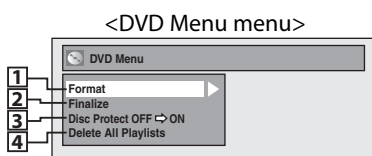
7. HDMI:

To set up the HDMI connection setting.

8. Reset All:

To reset the setting to the factory default.

DVD Menu / HDD Menu / Dubbing / CD Playback Mode



1. Format (DVD-RW only):

Allows you to format the disc.

2. Finalize:

Allows you to finalize a disc containing recorded titles.

3. Disc Protect (VR mode DVD-RW only):

Allows you to protect a disc from accidental editing or recording.

4. Delete All Playlists (VR mode DVD-RW only):

Allows you to delete playlist.

5. Random Play:

Allows you to activate the random playback feature.

6. Program Play: (Audio CD only)

Allows you to activate the program playback feature.

7. Slide Show: (JPEG/Kodak Picture CD files only)

Allows you to select the display time of the slide show mode.

8. Delete All Titles:

Allows you to delete all titles, including the protected titles, in the HDD title list.

9. Delete All Unprotected Titles:

Allows you to delete all unprotected titles in the HDD title list.

10. Delete All Playlists:

Allows you to delete all Playlists for HDD.

11. HDD → DVD:

Allows you to dub from HDD to DVD.

12. DVD → HDD:

Allows you to dub from DVD to HDD.

BEFORE YOU START

Switching HDD / DVD Mode

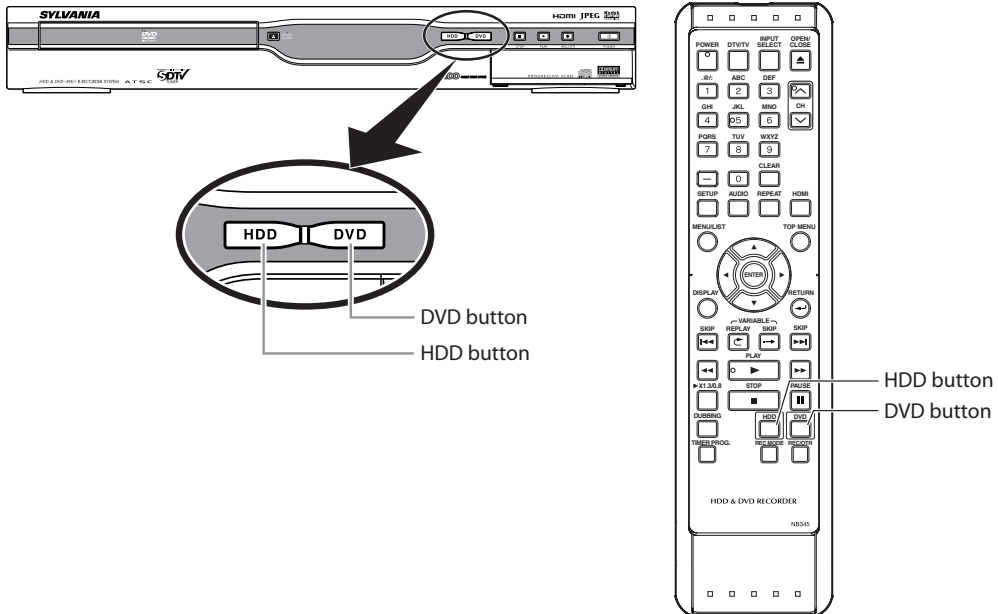
Because this unit is a combination of HDD and DVD recorder, you must first select which component (output mode) you wish to operate.

HDD mode

Press **[HDD]** to activate the HDD component.

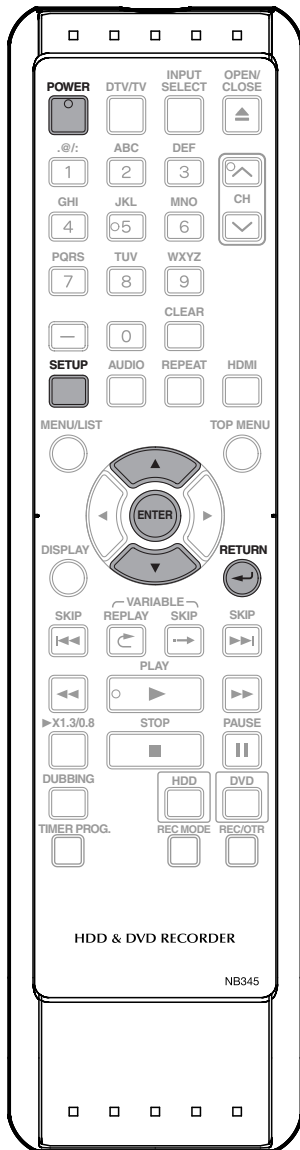
DVD mode

Press **[DVD]** to activate the DVD component.



INITIAL SETTING

Turn on this unit for the first time, you need to follow these steps.

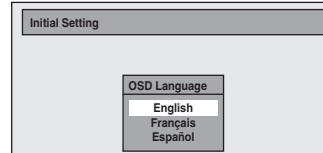


1 Press [POWER].

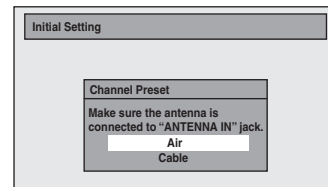
Before:

Turn on the TV. Select the input to which the unit is connected.

2 Use [▲ / ▼] to select your desired language, then press [ENTER] to set language.



3 Use [▲ / ▼] to select the desired channel preset type then press [ENTER].



The unit will start getting channels available in your area.

Air:

(When using antenna)

The channels broadcasted in TV and DTV are automatically scanned and memorized. Only the receivable channels in the area where this TV is used will be memorized.

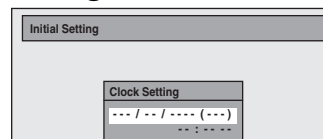
Cable:

(When using basic cable)

The channels broadcasted in CATV are automatically scanned and memorized.



4 Press [ENTER] to activate "Clock Setting".



5 Proceed to step 5 in "Manual Clock Setting" on page 32.

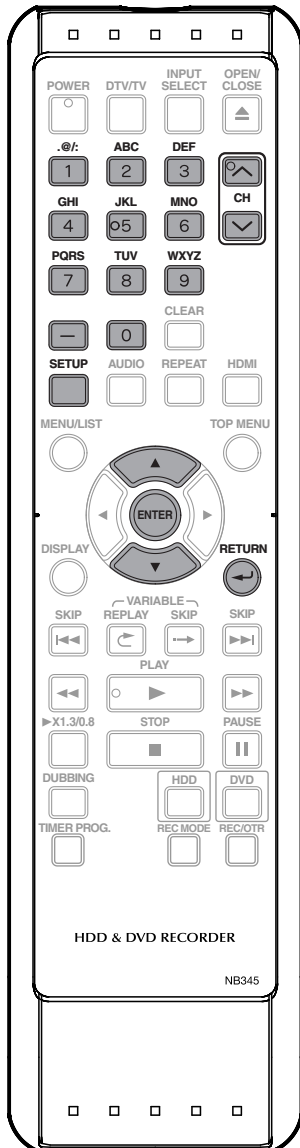
- If a PBS (public broadcasting station) is available in your area, press [RETURN ↵] or [SETUP] to exit, then follow "Auto Clock Setting" on page 31.

Input Mode Names for Common TV Brands (Example)			
Admiral	AUX	Panasonic	TV/VIDEO
Curtis Mathis	LINE1, LINE2, 00, 90, 91, 92, 93	RCA	INPUT, TV/VCR, 00, 90, 91, 92, 93
GE	INPUT, TV/VCR, 00, 90, 91, 92, 93	Samsung	TV/VIDEO
Hitachi	INPUT, AUX	Sanyo	VIDEO
JVC	VIDEO, VIDEO 1, VIDEO 2, VIDEO 3	Sharp	00
Kenwood	AUX	Sony	VIDEO1, VIDEO2, VIDEO3
LXI-Series	00	Toshiba	TV/GAME
Magnavox	AUX CHANNEL	Zenith	00

CHANNEL SETTING

If you have changed antenna connection, we recommend that you program channels available in your area with the following procedures.

Auto Channel Scan

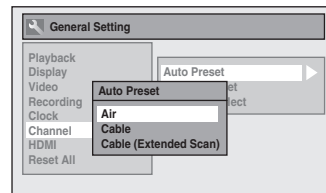


1 Press [SETUP] and use [▲ / ▼] to select "General Setting", then press [ENTER].

2 Use [▲ / ▼] to select "Channel", then press [ENTER].
"Channel" menu will appear.

3 Use [▲ / ▼] to select "Auto Preset", then press [ENTER].

4 Use [▲ / ▼] to select the type of broadcasting signal, then press [ENTER].



The unit will start getting channels available in your area.

Air:

(When using antenna)

The channels broadcasted in analog TV and digital TV are automatically scanned and memorized. Only the receivable channels in the area will be memorized.

Cable:

(When using basic cable)

The channels broadcasted in analog CATV are automatically scanned and memorized.

Cable (Extended Scan):

(When using basic cable)

The channels broadcasted in analog CATV and digital CATV are automatically scanned and memorized.

To cancel the auto channel preset during scanning:

Press [RETURN ↵] or [SETUP] to cancel.

5 When scanning is over, press [SETUP] to exit.

To cycle through only the memorized channels, use [CH ▲ / ▼].

To select a channel directly (including the ones not memorized), use [the Number buttons] and [-] (for digital TV channels).

Note

- If the auto channel preset is canceled during presetting, some channels not yet preset may not be received.
- The selection will depend on how you receive the TV channels.

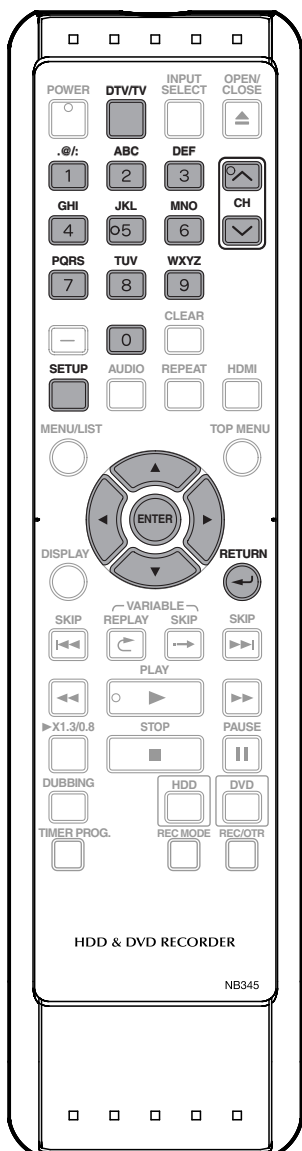
Adding/Deleting Channels

You may want to add or delete TV channels if your channel lineup changes or if you no longer watch some channels.

Adding channels is only available for the analog TV channels.

Make sure

- You perform "Auto Channel Scan" before adding or deleting the channels.



1 Press [DTV/TV] to select the mode (DTV or TV) to/from which you want to add or delete channels.

2 Press [SETUP] and use [▲ / ▼] to select "General Setting", then press [ENTER].

3 Use [▲ / ▼] to select "Channel", then press [ENTER].
"Channel" menu will appear.

4 Use [▲ / ▼] to select "Manual Preset", then press [ENTER].
"Manual Preset" menu will appear.

- If you are adding or deleting analog TV channels, go to **ANALOG** on page 30 to continue.
- If you are deleting digital TV channels, go to **DIGITAL** on page 30 to continue

Instructions continue on the next page.

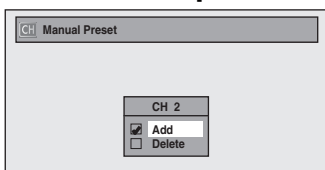
CHANNEL SETTING

ANALOG

5 Select the channel number to add or delete.

- Use [CH ^ / v] to cycle through only the memorized channels.
- Use [◀ / ▶] to cycle through all the channels including the ones not memorized.
- Use [the Number buttons] to select a channel directly.
- When a memorized channel is selected, "Add" is checked and highlighted as a default.
- When an unmemorized channel is selected, "Delete" is checked and highlighted as a default.

6 Use [▲ / ▼] to select "Add" or "Delete", then press [ENTER].



Your setting will be activated and it will automatically switch to the next channel so that you can continue adding or deleting channels.

7 Press [SETUP] to exit.

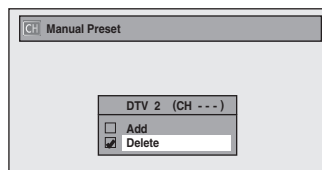
DIGITAL

5 Select the channel number to delete.

- Only the major channel is displayed in "Manual Preset" menu. (The channel number displayed in the parenthesis is a virtual channel number)
- Use [CH ^ / v] to cycle through only the memorized channels.
- You cannot use [◀ / ▶] for the digital TV channel selection.
- Use [the Number buttons] to select a channel directly.
- When an unmemorized channel is selected "Delete" is checked and highlighted as a default.

6 Use [▲ / ▼] to select "Delete", then press [ENTER]. Then select the next channel to delete.

- If the setting is complete, press [RETURN ↵] to activate "Manual Preset".



Your setting will be activated.

WARNING:

- For the digital TV channels, you cannot recover the deleted channels once they are deleted unless you perform the auto channel preset again.

7 Press [SETUP] to exit.

SETTING THE CLOCK

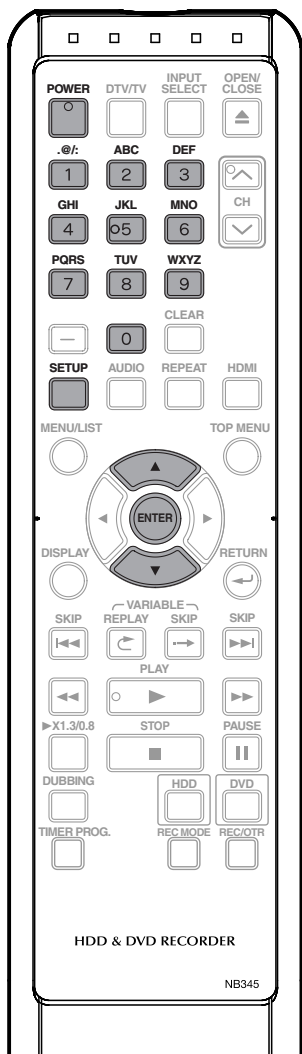
Set the clock before you try the timer programming. If a PBS (public broadcasting station) is available in your area, follow "Auto Clock Setting" below. If not, follow "Manual Clock Setting" on page 32.

Auto Clock Setting

This unit can set the time and date automatically by referring to a PBS station.

Make sure

- The antenna/cable TV connections are correct.
- Channels are set. (Refer to pages 28-30.)
- If this unit is connected to a cable/satellite box, select the local PBS station on them to set the clock automatically.



Note

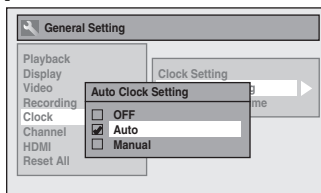
- The unit receives the clock data at 12:00 a.m/p.m from the PBS channel when the power is off.
- The clock may set itself automatically after this unit receive the antenna/cable signal and plug in the power cord.
- Only the analog PBS channel signal is effective for auto clock setting.

1 Press [SETUP] and use [▲ / ▼] to select "General Setting", then press [ENTER].

2 Use [▲ / ▼] to select "Clock", then press [ENTER].
"Clock" menu will appear.

3 Use [▲ / ▼] to select "Auto Clock Setting", then press [ENTER].

4 Use [▲ / ▼] to select "Auto", then press [ENTER].



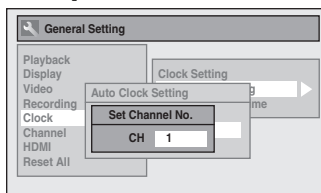
5 Press [SETUP] to exit.

6 Press [POWER] to turn off the unit.
This unit will search for the time only when the power is off. Leave it off for several minutes to give this unit time to set the clock.

If the unit chooses an incorrect PBS channel, set the PBS channel manually by following the steps below.

1 Select "Manual" at step 4, then press [ENTER].

2 Use [the Number buttons] or [▲ / ▼] to enter your PBS channel number, then press [ENTER].

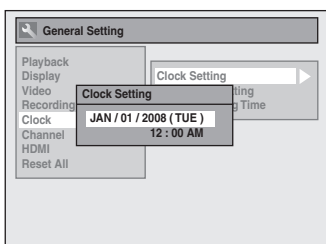


3 Press [SETUP] to exit and turn off the unit.

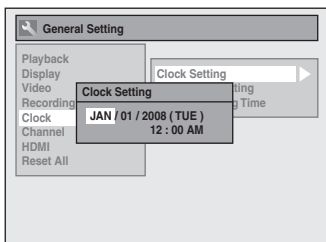
SETTING THE CLOCK

Manual Clock Setting

- 1 Press [SETUP] and use [▲ / ▼] to select "General Setting", then press [ENTER].
- 2 Use [▲ / ▼] to select "Clock", then press [ENTER].
"Clock" menu will appear.
- 3 Use [▲ / ▼] to select "Clock Setting", then press [ENTER].
- 4 Use [▲ / ▼] to select calendar or time, then press [ENTER].



- 5 Use [◀ / ▶] to select an item to set, and use [▲ / ▼] to select the contents to suit your preference, then press [ENTER].



Your setting will be activated.
The clock start counting when you press [ENTER].

- 6 Press [SETUP] to exit.

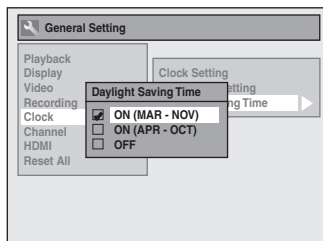
Note

- Your clock setting will be lost if either there is a power failure or this unit has been unplugged for more than 30 seconds when you set the clock manually.
- For setting the day, year, hour and minute, [the Number buttons] can also be used.
- You can set the built-in calendar from the year 2007 up to 2057.

Daylight Saving Time

When "Daylight Saving Time" is "ON", the unit clock will automatically adjust the time in order to fit the daylight saving time.
"ON (MAR - NOV)" has been selected as the default.

- 1 Press [SETUP] and use [▲ / ▼] to select "General Setting", then press [ENTER].
- 2 Use [▲ / ▼] to select "Clock", then press [ENTER].
"Clock" menu will appear.
- 3 Use [▲ / ▼] to select "Daylight Saving Time", then press [ENTER].
- 4 Use [▲ / ▼] to select "ON (MAR - NOV)", "ON (APR - OCT)" or "OFF", then press [ENTER].



ON (MAR - NOV):

Move forward one hour on the second Sunday in March and move back one hour on the first Sunday in November.

ON (APR - OCT):

Move forward one hour on the first Sunday in April and move back one hour on the last Sunday in October.

- 5 Press [SETUP] to exit.

TUNER SETTINGS

Switching Analog Mode / Digital Mode

You can easily switch between the analog TV (NTSC) and digital TV (ATSC) with the remote control.

Press **[DTV/TV]** on the remote control.

- The analog mode and digital mode switch alternately.

Note

- When you switch from the analog mode to the digital mode, it may take awhile until the digital channel selection is completed. The following screen is displayed while switching the mode.



Channel Selection

Select channels by using **[CH ^ / v]** or **[the Number buttons]** on remote control.

[CH ^ / v]

Use **[CH ^ / v]** to change the channel.

[the Number buttons]

Press the channel number with **[the Number buttons]** to select a channel you want to watch.

<Analog TV channels>

Enter the channel number with **[the Number buttons]** to select a channel you want to watch.

For 1-digit number

e.g.) 2 ch: **[0] + [2]**, **[2] + [-]** or **[2]** + leave it for 2 seconds.

For 2-digit number

e.g.) 25ch: **[2] + [5]**

<Digital TV channels>

Enter the major and minor channel number with **[the Number buttons]** to select a channel you want to watch.

For 1-digit number

e.g.) 2-2 ch:
major channel **[0] + [2]** or **[2] + [-]**
minor channel **[0] + [2]**, **[2] + [-]** or **[2]** + leave it for 2 seconds.

For 2-digit number

e.g.) 35-16ch:
major channel **[3] + [5]**
minor channel **[1] + [6]**

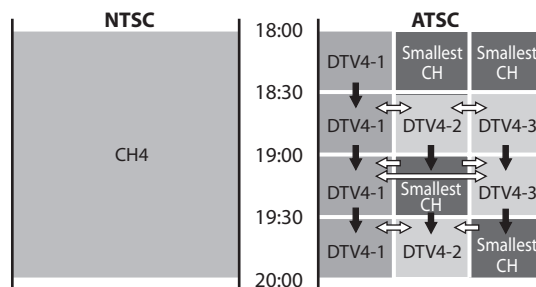
- If you enter 1 digit for major channel and leave it for 2 seconds, the number will be taken as the major channel and lowest minor channel of the major channel will be displayed.
- If there is no minor channel input, lowest minor channel of the major channel will be displayed.

Note

- In digital TV broadcasting, 2 or more channels, called minor channels, are simultaneously broadcast on one main channel, called major channel.

About minor-channel broadcasting:

There may be different programs being broadcast on minor channels through a single channel from ATSC. You can watch each minor channel program being broadcast by selecting one of the minor channels.



➡ : change automatically

⇔ : change manually by using **[CH ^ / v]**

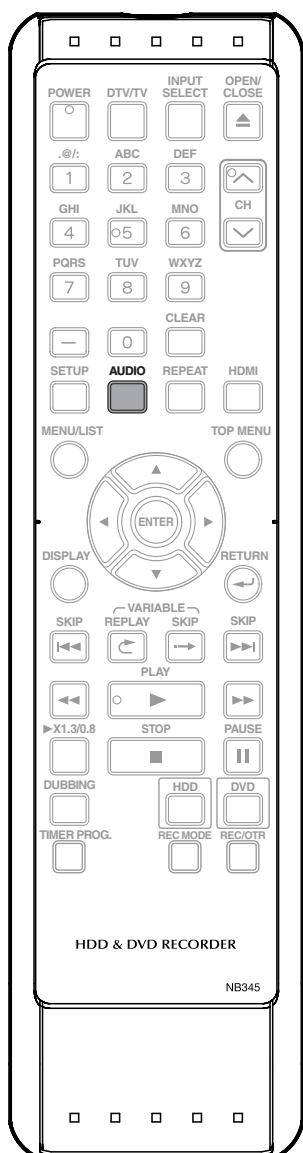
TUNER SETTINGS

This section describes how to switch the TV audio.

When you record a TV program, only output sound channel will be recorded.

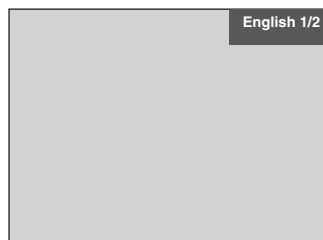
Selecting TV Audio

Digital TV



1

Press [AUDIO] to cycle through available audio languages.



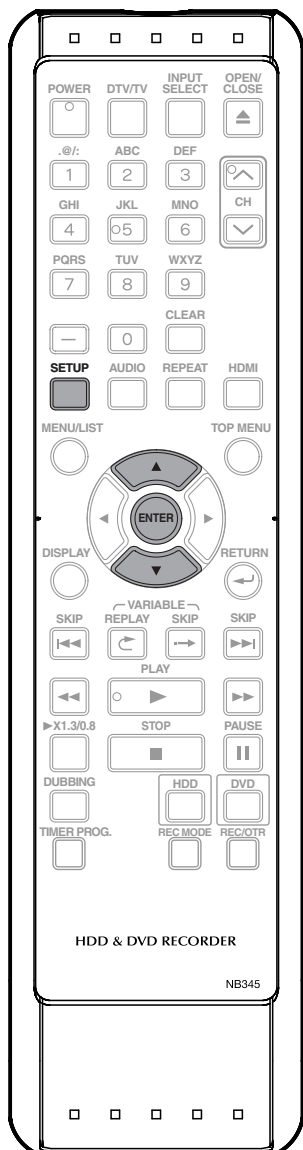
- When you press **[AUDIO]**, selected language will be displayed on the TV screen.
- Every time you press **[AUDIO]**, the language will be switched.
e.g.) English 1/3 → Spanish 2/3 → Other 3/3
- Available languages differ depending on the broadcast.
- The information display will automatically disappear.
- When you record digital TV broadcasting, the audio language you have selected will be recorded.

Note

- The timer recording for digital TV cannot record any audio language other than English.
- **[AUDIO]** does not control external device audio.
- When there is only one audio channel on the broadcast, pressing **[AUDIO]** does not display anything.

Selecting TV Audio (cont'd)

Analog TV

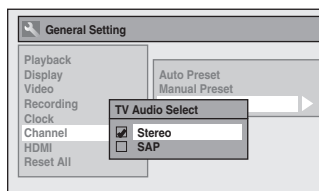


1 Press [SETUP] and use [▲ / ▼] to select "General Setting", then press [ENTER].

2 Use [▲ / ▼] to select "Channel", then press [ENTER].
"Channel" menu will appear.

3 Use [▲ / ▼] to select "TV Audio Select", then press [ENTER].

4 Use [▲ / ▼] to select "Stereo" or "SAP", then press [ENTER].



Stereo:

Outputs main-audio.

SAP (secondary audio program):

Outputs sub-audio.

5 Press [SETUP] to exit.

Note on recording analog TV channel audio

- When you record an analog TV program available in second audio or stereo, you have to select either "Stereo" or "SAP" in "Channel" menu beforehand. Refer to the following table to check an appropriate setting.

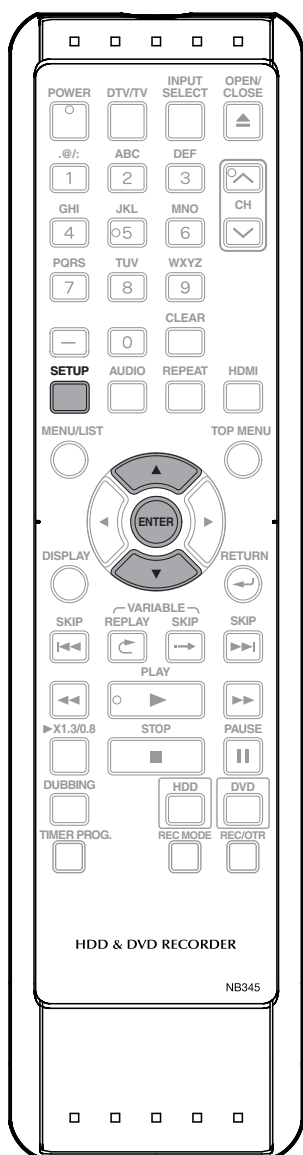
Selected audio	Broadcast audio	Disc recording	Audio output
Stereo	STEREO+SAP	STEREO	STEREO
	STEREO	STEREO	STEREO
	MONO+SAP	MONO	MONO
	MONO	MONO	MONO
SAP	STEREO+SAP	SAP	SAP
	STEREO	STEREO	STEREO
	MONO+SAP	SAP	SAP
	MONO	MONO	MONO

TUNER SETTINGS

DTV Closed Caption

Digital TV

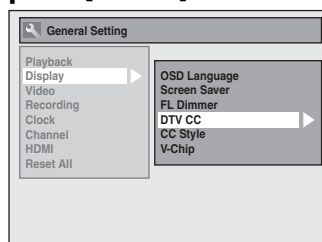
Apart from closed captions, Digital TV has its own closed captions called DTV CC. Use this menu to change the settings for DTV CC.



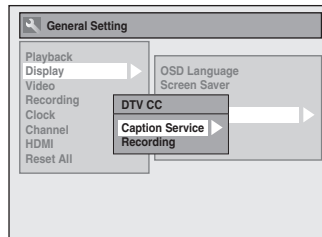
1 Press [SETUP] and use [▲ / ▼] to select “General Setting”, then press [ENTER].

2 Use [▲ / ▼] to select “Display”, then press [ENTER].

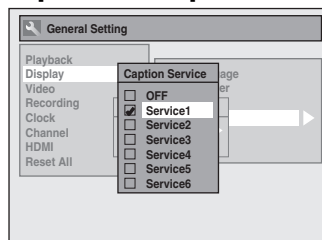
3 Use [▲ / ▼] to select “DTV CC”, then press [ENTER].



4 Use [▲ / ▼] to select “Caption Service”, then press [ENTER].



5 Use [▲ / ▼] to the desired DTV closed caption, then press [ENTER].



OFF:

Select if you do not want DTV CC. This is the default.

Service 1 to Service 6:

Select one of these before changing any other item in the closed caption menu. Choose “Service 1” under normal circumstances.

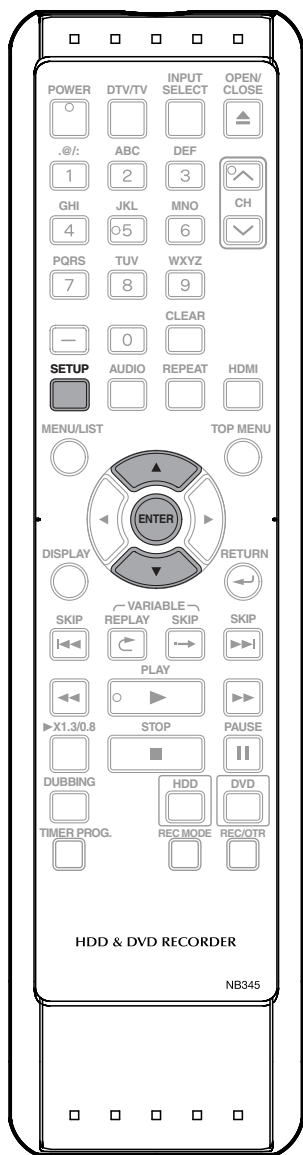
6 Press [SETUP] to exit.

TUNER SETTINGS

Closed Caption Style

Digital TV

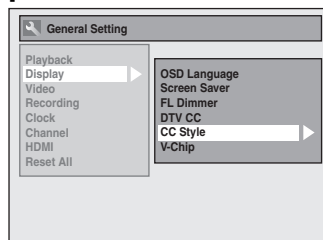
Digital TV can also change the style of its closed caption such as font, color or size, etc.



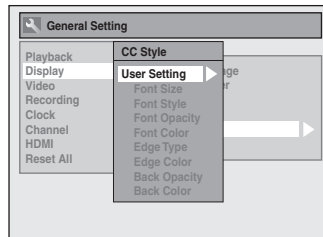
1 Press [SETUP] and use [▲ / ▼] to select "General Setting", then press [ENTER].

2 Use [▲ / ▼] to select "Display", then press [ENTER].

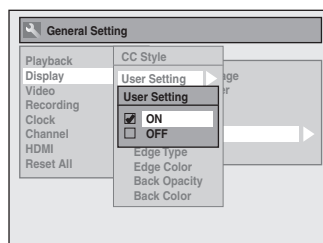
3 Use [▲ / ▼] to select "CC Style", then press [ENTER].



4 Use [▲ / ▼] to select "User Setting", then press [ENTER].



5 Use [▲ / ▼] to select "ON", then press [ENTER].

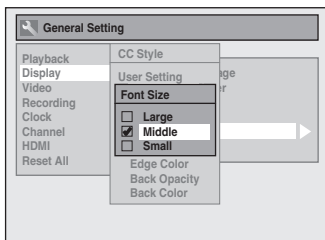


Instructions continue on the next page.

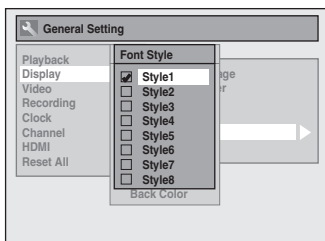
6 Use [▲ / ▼] to select the item and switch the setting for each item you want to set, then press [ENTER].

- When "User Setting" is set to "ON", you can set the following items. CC style set by "User Setting" will be displayed.
- The setting description for each item is shown below.

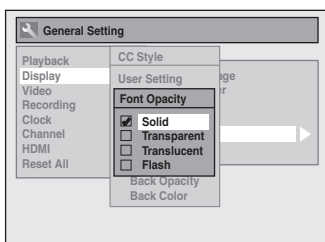
Font size of the displayed caption can be switched as below.



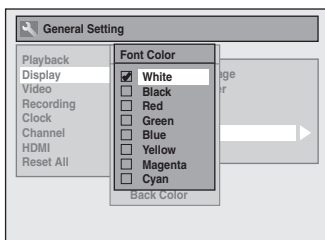
Font style of the displayed caption can be switched as below.



Font opacity of the displayed caption can be switched as below.

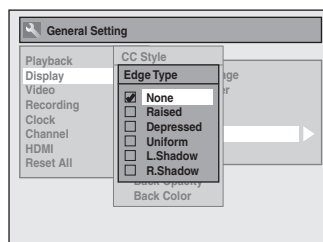


Font color of the displayed caption can be switched as below.



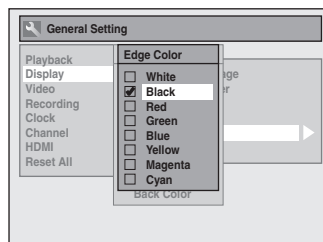
<Edge Type>

Edge type of the displayed caption can be switched as below.



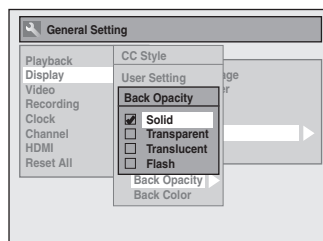
<Edge Color>

Edge color of the displayed caption can be switched as below.



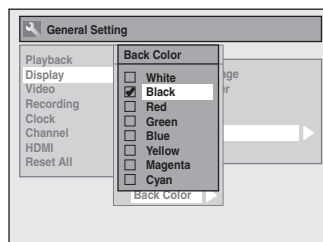
<Back Opacity>

Background opacity of the displayed caption can be switched as below.



<Back Color>

Background color of the displayed caption can be switched as below.



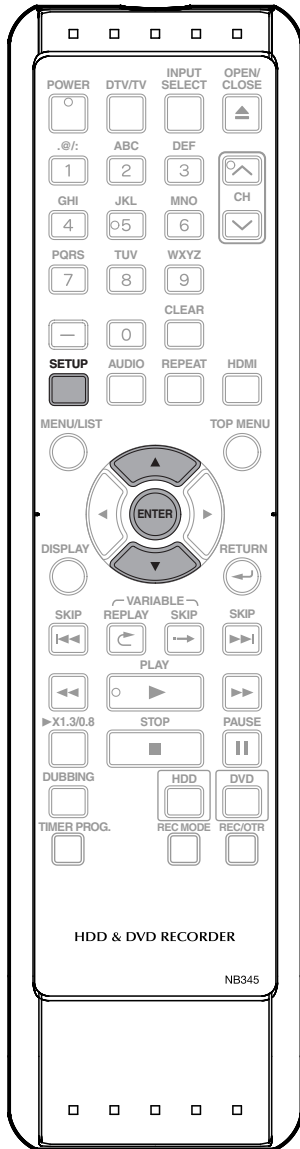
7 Press [SETUP] to exit.

FORMATTING A DISC

Choosing the Recording Format of a Brand-New DVD-RW

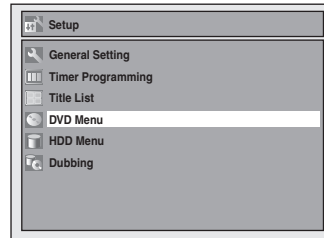


When inserting a brand-new DVD-RW, the unit automatically starts to initialize the disc. DVD-RW will be formatted either video or VR mode according to the recording format mode setting of the unit. Before inserting a brand-new DVD-RW, you need to set the recording format to the desired mode. You can also manually format a DVD-RW once it has been used.



1 Press [SETUP].

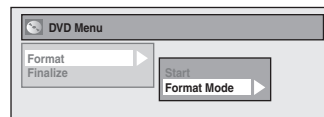
2 Use [▲ / ▼] to select "DVD Menu", then press [ENTER].



3 Use [▲ / ▼] to select "Format", then press [ENTER].



4 Use [▲ / ▼] to select "Format Mode", then press [ENTER].



5 Use [▲ / ▼] to select "Video mode" or "VR mode", then press [ENTER].

6 Press [SETUP] to exit.

7 Insert a brand-new disc.
Formatting will start.



8 Formatting is completed.
"100%" is indicated.

Note

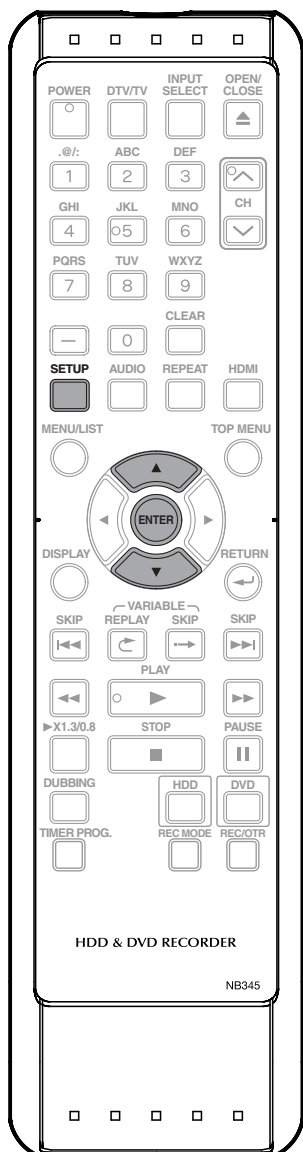
- The recording format setting is effective only for DVD-RW. You cannot change the recording format for a DVD-R.
- You cannot mix two formats on one DVD-RW. If you insert a disc that has been recorded before, the recording format cannot be changed even if you change it in the main menu.

FORMATTING A DISC

Reformatting a Disc Manually



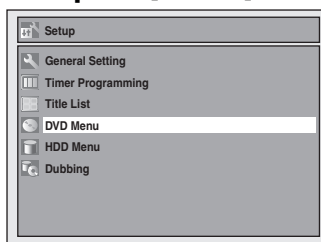
If you are using a DVD-RW, you can format the disc by performing "Format". You can format DVD-RW for either video mode recording or VR mode recording.



Insert a recordable disc.

1 Press [SETUP].

2 Use [▲ / ▼] to select "DVD Menu", then press [ENTER].



3 Use [▲ / ▼] to select "Format", then press [ENTER].

e.g.) VR mode DVD-RW



4 Use [▲ / ▼] to select "Start", then press [ENTER].

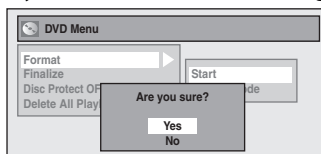


Selection menu will appear and prompt you to confirm.

5 Use [▲ / ▼] to select "Yes", then press [ENTER].

Formatting will start.

If you want to cancel formatting, select "No".



6 Formatting is completed.

"100%" is indicated.



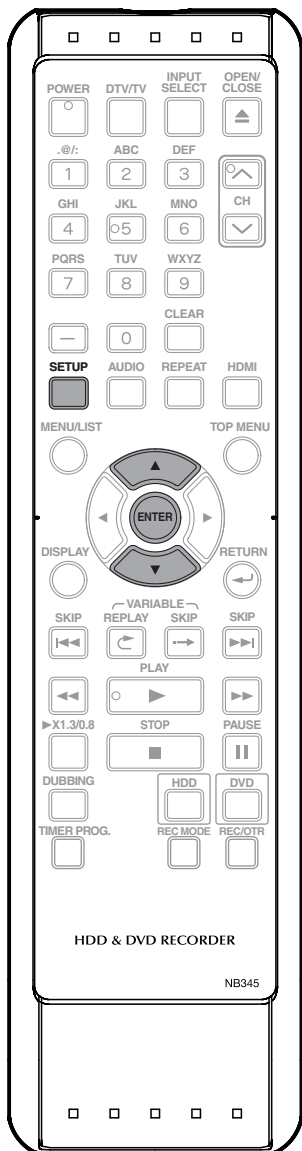
Note

- When you reformat the disc, the contents of the disc are erased.
- For DVD-RW, make sure that the recording format is set to the desired mode. (See steps 1 to 6 in "Choosing the Recording Format of a Brand-New DVD-RW" on page 39.)

SETTING A DISC TO PROTECT



To prevent accidental recording, editing or erasing the titles, you can protect them from "DVD Menu" menu.



1

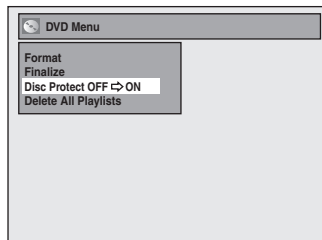
Press [SETUP].

2

Use [▲ / ▼] to select "DVD Menu", then press [ENTER].

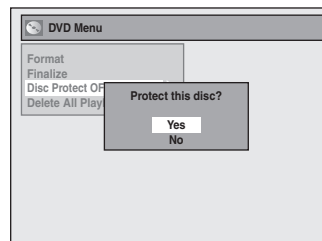
3

Use [▲ / ▼] to select "Disc Protect OFF ➡ ON", then press [ENTER].



4

Use [▲ / ▼] to select "Yes", then press [ENTER].



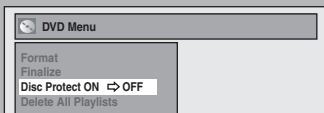
A disc will be protected.

This operation may take awhile to be completed.

Note

To cancel the disc protect:

- When you insert a disc protected with this unit, "Disc Protect ON ➡ OFF" will appear instead of "OFF ➡ ON".



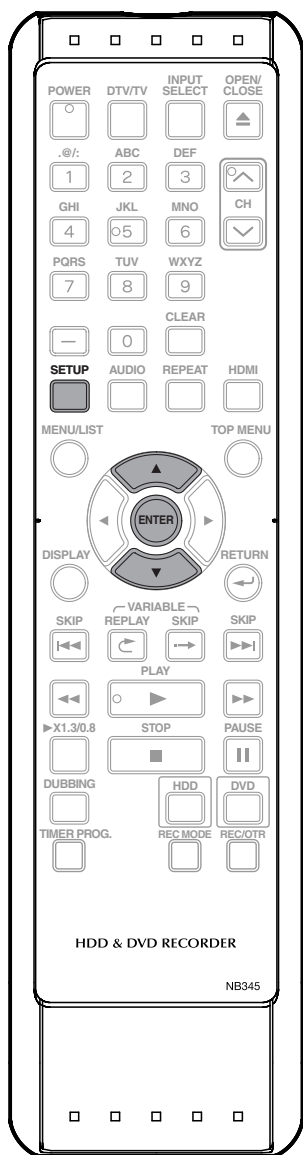
To release the protection for the disc, select "Disc Protect ON ➡ OFF" at step 3, then follow rest of the procedures.

PLAYING THE DISCS IN OTHER DVD PLAYERS

Auto Finalizing



You can finalize discs automatically using this function. You can use this function to finalize discs after finishing all timer recordings and at the end of the disc space.

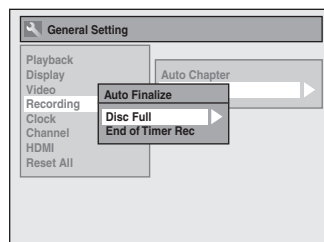


1 Press [SETUP] and use [▲ / ▼] to select “General Setting”, then press [ENTER].

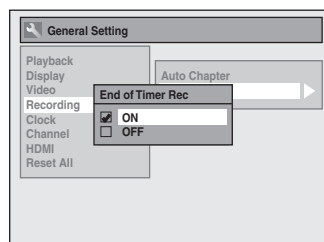
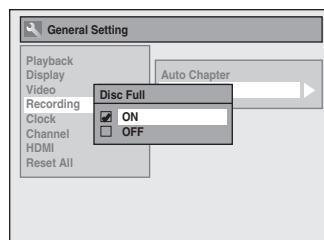
2 Use [▲ / ▼] to select “Recording”, then press [ENTER].
“Recording” menu will appear.

3 Use [▲ / ▼] to select “Auto Finalize”, then press [ENTER].

4 Use [▲ / ▼] to select “Disc Full” or “End of Timer Rec”, then press [ENTER].



5 Use [▲ / ▼] to select “ON”, then press [ENTER].



Your setting will be activated.

6 Press [SETUP] to exit.

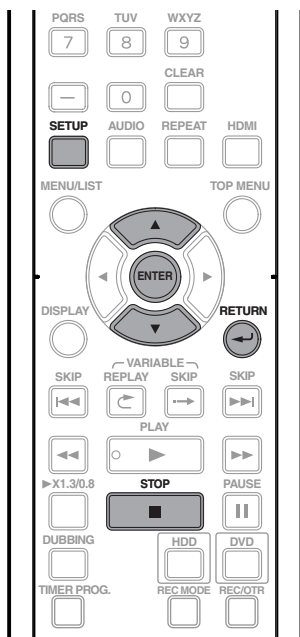
Finalizing a Disc



You will need to finalize discs to play back on other DVD players.

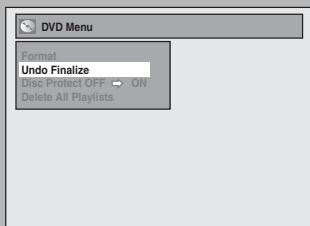
Finalizing may take several minutes up to an hour.

Since the process of the finalization fills empty space of the disc, a shorter recording period on the disc will require a longer time period for finalization. Do not unplug the power cord during finalization.



Note

- Finalizing a disc in video mode automatically creates a title menu.
- Even after DVD-RW in VR mode is finalized, you can still record or edit. After you finalize DVD-RW in video mode or DVD-R, you cannot edit or record anything else on that disc.
- If you insert a DVD-RW finalized with this unit, "Undo Finalize" will appear instead of "Finalize" at step 3.
- To release the finalization of the DVD-RW disc, select "Undo Finalize" at step 3.



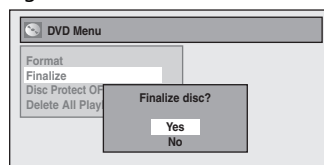
- DO NOT power off during finalizing. This may result in a malfunction.

1 Press [SETUP].

2 Use [▲ / ▼] to select "DVD Menu", then press [ENTER].
"DVD Menu" menu will appear.

3 Use [▲ / ▼] to select "Finalize", then press [ENTER].

4 Use [▲ / ▼] to select "Yes", then press [ENTER].
e.g.) VR mode DVD-RW



Finalizing will start.

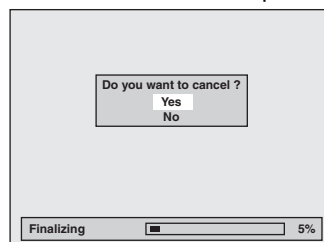


This operation may take awhile to be completed.

5 Finalizing is completed.

To cancel finalizing... (DVD-RW only)

Press [STOP ■] during the finalizing is in progress. Use [▲ / ▼] to select "Yes", then press [ENTER]. Finalizing is canceled and the unit switches to stop mode.



If "⊙" appears when [STOP ■] is pressed, you cannot cancel finalizing because the finalizing has already reached a critical point in its process.

If "No" is selected and [ENTER] or [RETURN ↵] is pressed, finalizing is continued.

You cannot cancel finalizing DVD-R once it has started.

INFORMATION ON RECORDING

Recording Mode

You can select a recording mode among 5 options, and the recording time will depend on the recording mode you select as follows.

Recording mode	Recording time			Video/ Sound Quality
	DVD 12cm	DVD 8cm	HDD	
XP	60 min	18 min	30 hrs	☆☆☆☆☆
SP	120 min	36 min	60 hrs	☆☆☆☆☆
LP	240 min	72 min	120 hrs	☆☆☆
EP	360 min	108 min	180 hrs	☆☆
SLP	480 min	144 min	240 hrs	☆

- The recording times listed above are estimates and are for reference purposes only. Actual recording times may vary.
- The audio and video quality of content being recorded may differ depending on the recording mode/recording time chosen.

Note

- **This unit cannot record to CD-RW or CD-R.**
- All high definition pictures will be down converted to the standard definition pictures when they are recorded on this unit.
- DVD-RW/-R and CD-RW/-R recorded on a personal computer or a DVD or CD recorder may not be played back if the disc is damaged or dirty or if there is condensation on the player's lens.
- If you record a disc using a personal computer, even if it is recorded in a compatible format it may not be played back because of the settings of the application software used to create the disc. (Check with the software publisher for more detailed information.)
- Discs recorded in video mode on this unit cannot record additional information using other DVD recorders.
- Since the recording is made by the VBR (variable bit rate) method, depending on the picture you are recording, the actual remaining time for recording may be a little shorter than the remaining time displayed on the TV screen.

Restrictions on Recording

You cannot record copy-protected program using this unit. Copy-protected video signal is included in DVD-videos, some satellite broadcasts, some pay-per-view stations and some "premium" stations.

If copy-protected material is detected, recording will pause or stop automatically and an error message appears on the screen.

"Copy-once only" video can only be recorded to CPRM compatible DVD-RW formatted in VR mode or internal HDD.

What is "CPRM"?

CPRM is a copy protection system with scramble system regarding the recording of "copy-once" broadcast programs. CPRM stands for Content Protection for Recordable Media.

This unit is CPRM compatible, which means that you can record copy-once broadcast programs, but you cannot make another copy of those recordings. CPRM recordings can only be made on CPRM compatible DVD-RW formatted in VR mode, and CPRM recordings can only be played back on DVD players that are specifically compatible with CPRM.

Making discs playable in other DVD players (Finalize)

For DVD-RW/-R, it is necessary to finalize the disc after recording, in order to play back the disc on other DVD players. (Refer to pages 42-43.) When video mode DVD-RW/-R are finalized, a title menu is created. You cannot finalize discs in other DVD recorders.

About HDD

HDD is a special device which has high recording density and is suited for long-time recording or high-speed cueing but by contrast, has many factors which can cause breakage. Use HDD on the premise that you should dub the recorded program to a DVD disc to protect your precious videos.

HDD is a temporary storage location:

HDD is not a permanent storage location of the recorded contents. Be sure to use it as a temporary storage location until you watch the program once, edit them, or dub them to a DVD disc.

Be sure to dub (back up) data promptly if you find abnormalities in HDD:

If there is mechanical trouble with the HDD, grinding or other sounds may be heard or blocky noise may appear on the image. If you continue to use as it is, deterioration may continue and eventually the HDD may not be used at all. If you notice these symptoms of a failing HDD, promptly dub the data to a DVD disc. When an HDD fails, recovery of recorded content (data) may be impossible.

About the remaining capacity of HDD recording time:

In recording to HDD, the Remaining Capacity Display may differ from the actual recordable time as this unit adopts Variable Bit Rate encoding, which varies the recording (storage) amount of data in conformity with the information amount of video. Before recording to the HDD, ensure there is sufficient space on the HDD by deleting unnecessary titles in advance. (Remaining capacity will not increase if you only delete Playlists.)

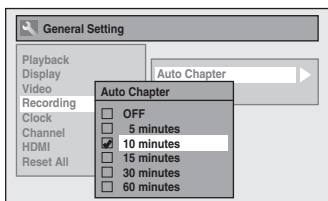
SETTINGS FOR A RECORDING

Setting for Auto Chapter



You can set a specified time for chapter marks.

- 1) Press [SETUP] and use [▲ / ▼] to select “General Setting”, then press [ENTER].
- 2) Use [▲ / ▼] to select “Recording”, then press [ENTER].
“Recording” menu will appear.
- 3) Use [▲ / ▼] to select “Auto Chapter”, then press [ENTER].
- 4) Use [▲ / ▼] to select a desired time option, then press [ENTER].



- 5) Press [SETUP] to exit.

Note

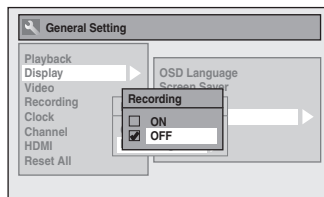
- The interval for auto chapter may be up to two minutes different from the time option you set.
- A blank chapter may be created depending on the remaining time of the disc.

Recording the DTV Closed Caption



You can record the DTV Closed Caption as the part of the image for the recording program and see the recorded closed caption even with the TV that is not closed caption compliant.

- 1) Press [SETUP] and use [▲ / ▼] to select “General Setting”, then press [ENTER].
- 2) Use [▲ / ▼] to select “Display”, then press [ENTER].
- 3) Use [▲ / ▼] to select “DTV CC”, then press [ENTER].
- 4) Use [▲ / ▼] to select “Recording”, then press [ENTER].
 - If the “Caption Service” is set to “OFF”, you cannot select “Recording”.
- 5) Use [▲ / ▼] to select “ON”, then press [ENTER].



- 6) Press [SETUP] to exit.

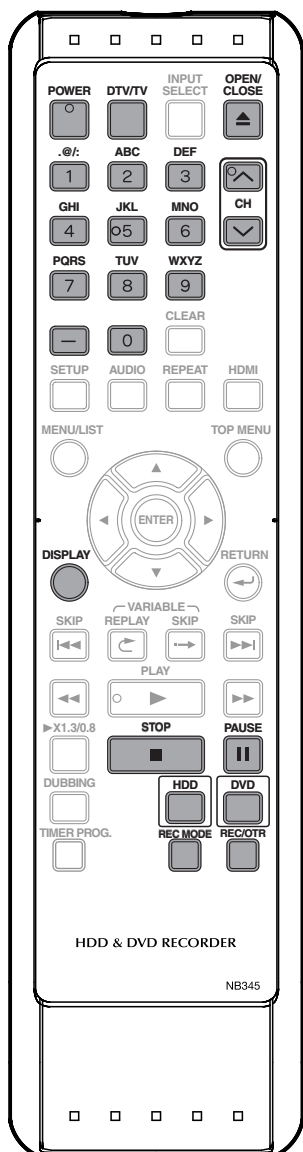
Note

- If the “Caption Service” is set to “OFF”, the caption will not be recorded.

BASIC RECORDING & ONE-TOUCH TIMER RECORDING



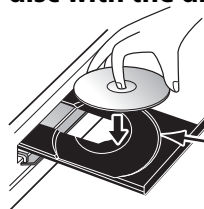
Follow the steps to record TV programs.



- 1 Press [POWER] to turn on the unit.**
Turn on the TV and be sure to select the input to which the unit is connected.
If you are recording to the HDD, press [HDD], then proceed to step 5.
If you are recording to a disc, press [DVD].

- 2 Press [OPEN/CLOSE ▲] to open the disc tray.**

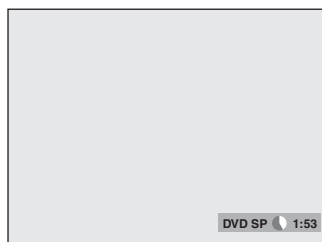
- 3 Place the disc on the disc tray with its label facing up. Be sure to align the disc with the disc tray guide.**



Align the disc to the disc tray guide.

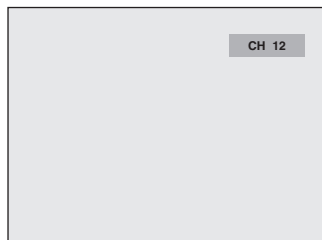
- 4 Press [OPEN/CLOSE ▲] to close the disc tray.**

- 5 Press [REC MODE] to select a recording mode.**
Refer to "Recording Mode" on page 44.

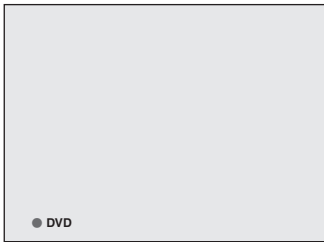


- 6 Press [DTV/TV] to select analog TV or digital TV, then use [CH ^ / v] or [the Number buttons] and [-] (for digital TV channels) to select a desired channel to record.**

Refer to "Switching Analog Mode/Digital Mode" and "Channel Selection" on page 33.

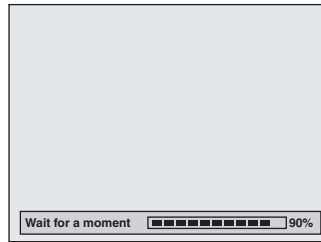


- 7 Press [REC/OTR] to start recording.**
The "● HDD" or "● DVD" mark will be displayed on the TV screen briefly.



Press **[PAUSE III]** to pause recording.
Press **[PAUSE III]** or **[REC/OTR]** again to restart recording.

- 8 Press [STOP ■] to stop recording.**
The recorded title will be included in the title list. (Refer to "Guide to a Title List" on page 76.)

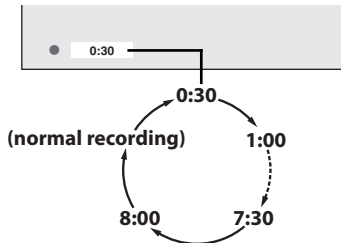


This operation may take awhile to be completed.

To set one-touch timer recording (OTR)...

This is a simple way to set the recording time in blocks of 30 minutes.

Press **[REC/OTR]** repeatedly until the desired recording time (30 minutes to 8 hours) appears on the TV screen. One-touch timer recording will start.



- To change the recording length during one-touch timer recording, press **[REC/OTR]** repeatedly until the desired length appears.
- To cancel one-touch timer recording within the specified time, press **[STOP ■]**.

Note

- When you press **[REC/OTR]**, recording starts immediately and continues until the HDD or disc is full, record 12 hours to HDD or you stop recording.
- When the unit clock has not been set, the space for a date and time of title names will be blank.
- When you record a TV program onto HDD / DVD-RW/-R, you have to select the TV channel audio beforehand. Only the selected channel audio will be recorded. Refer to "Selecting TV Audio" on pages 34-35 for more details.
- You cannot change the recording mode during the recording pause mode.
- You can change a channel to be recorded during the recording pause mode.
- You can play back a title on one component while making a recording on other. To do so, simply select the component (HDD or DVD) you like to use for the playback by pressing **[HDD]** or **[DVD]** during HDD / DVD recording. And then follow the normal playback procedure.
- If playback and recording are in progress at the same time, select the appropriate component by pressing **[HDD]** or **[DVD]** before you press **[PAUSE III]** or **[STOP ■]** to pause or stop the operation.

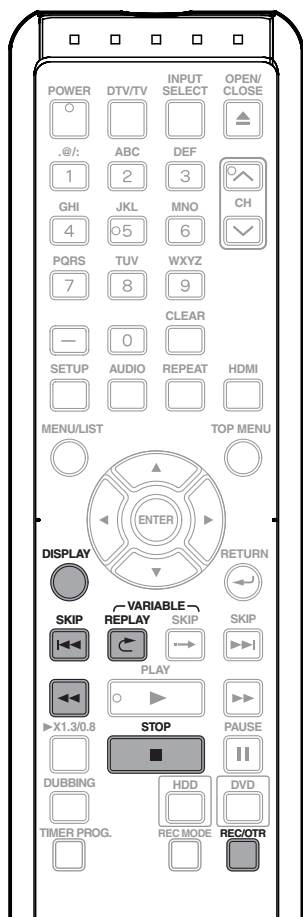
Note for one-touch timer recording

- The remaining recording time will be displayed on the front panel display during one-touch timer recording. Press **[DISPLAY]** to see it on the TV screen.
- Unlike the timer recording, you can perform the following operations during one-touch timer recording.
 - Turning off the power (One-touch timer recording will be canceled.).
 - Using **[REC/OTR]** on the remote control.
- You cannot use the pause function during one-touch timer recording.

AUTOSTART RECORDING



Every time you turn on this unit, this unit automatically records the channel currently viewed and temporarily stores the recorded content to the HDD (Autostart recording). By using this function, you can pause or go back the TV program you are currently watching, and you can also start recording the whole TV program even at the middle of the TV program. The temporary recording can be made up to 6 hours of time range. If the recording exceeds 6 hours, earliest recording will be overwritten.



The autostart recording will be stopped, cleared in following cases:

- Turning off the power
- Start recording
- Editing titles or goes into editing menu
- Deleting tiles (DVD only)
- Start dubbing
- Changing input channels
- Using any functions in "DVD Menu" or "HDD Menu"
- Selecting following menus:
 "General Setting" → "Display" → "V-Chip" → "Downloadable Rating"
 "General Setting" → "Channel" → "Auto Preset"
 "General Setting" → "Channel" → "Manual Preset"
- The autostart recording will automatically resume for new recording

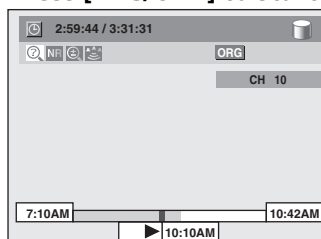
For how to playback the autostart recording, refer to "Playing back the Autostart Recording" on page 70.

Recording the Contents of the Autostart Recording

1 When watching TV program through this unit's tuner, use [SKIP ◀◀], [REV ◀◀] or [VARIABLE REPLAY ⤴] to locate your desired point to start recording.

- If you press [DISPLAY], the autostart recording information will appear. Refer to page 23.

2 Press [REC/OTR] to start recording.



From the selected point, the contents of the autostart recording become a recording title in the HDD while the unit continues to record the current content of the channel.

3 Press [STOP ■] twice to stop recording.



The recording stops and new autostart recording begins.

- If you press [STOP ■] once, the image on the TV screen goes back to current content of the channel while the recording continues.

Note

- In the autostart recording, when you display the DTV program information, the information will be recorded as the part of the picture.
- When you record the contents of the autostart recording, the recording mode is always SP.
- If there is not enough recordable space on HDD to record from the selected point to current point, you cannot record the content of autostart recording.
- When you record the content of the autostart recording, the recording mode will be SP.
- When you are recording the contents of the autostart recording, if you record the part that is copy-protected, "Copy guard detected." appears and you are not able to watch the part.

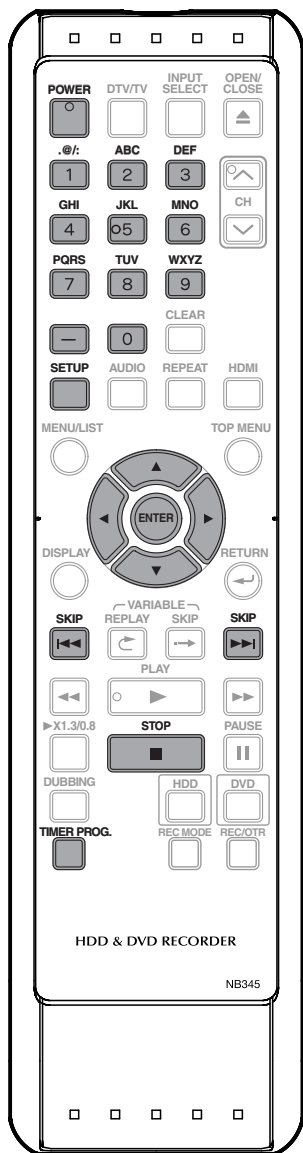
TIMER RECORDING



You can program the unit to record up to 36 programs within one month in advance. Daily or weekly program recordings are also available.

Before recording, make sure

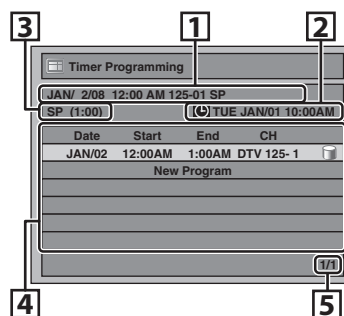
- Set the clock before setting a timer programming.
- Insert a recordable disc with enough recordable space.



Note

- If you have not set the clock yet: "Manual Clock Setting" menu will appear instead of the timer programming list at step 1. Continue with the step 4 in "Manual Clock Setting" on page 32 before setting a timer programming.
- Use [◀/▶] to move the cursor to the left and the right in "Timer Programming" menu.
- You cannot make a program whose recording time exceeds 12 hours.

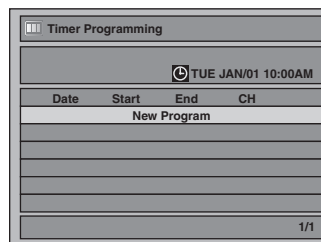
Guide to Timer Programming Display



1. Title of a Timer Program (Contains date, time, channel, recording mode of the program)
2. Current date and time
3. Recording mode and length of the recording
4. Timer program list
5. Total number of pages and current page (6 pages maximum)

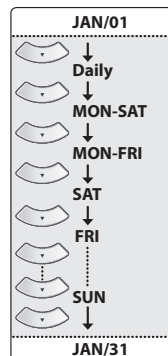
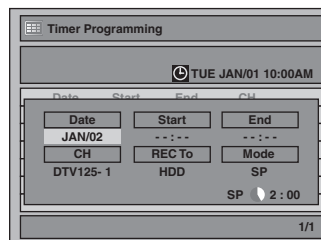
1 Press [TIMER PROG.].

2 Use [▲ / ▼] to select "New Program", then press [ENTER].



- If there are 6 or more programs, use [SKIP ◀▶] to change pages.

3 Use [▲ / ▼] to enter the date, then press [▶].

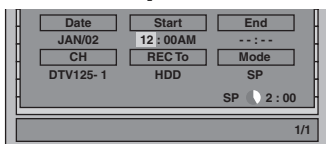


When pressing [▼] at the current date, the date will change as follows.

e.g.) January 1st

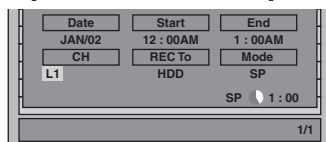
Instructions continue on the next page.

4 Use [▲ / ▼ / ◀ / ▶] or [the Number buttons] to enter the start and end time, then press [▶].



- You cannot make a program whose recording time exceeds 12 hours.

5 Use [▲ / ▼] to select analog (" - - ") / digital ("DTV") mode or external input (L1 / L2), then press [▶].



To record from external input (e.g., cable/ satellite box), select L1 or L2.

Use [▲ / ▼] to select the channel number to record.

For digital mode, select both major and minor channels. Refer to "How to select a channel number for the timer recording" on page 51 for more details.

e.g.) analog mode

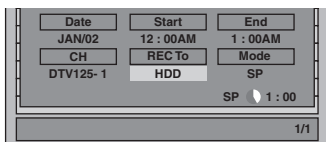


e.g.) digital mode



6 Use [▲ / ▼] to select the recording media ("HDD" or "DVD"), then press [▶].

e.g.) recording to HDD



7 Use [▲ / ▼] to select a recording mode.



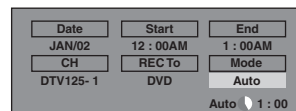
Refer to "Recording Mode" on page 44.

- You can check the remaining recordable space of the disc when you select the recording mode.



Auto recording mode select (DVD only)...

When "Auto" is selected as a recording mode, the unit calculates how much time is available on the disc and selects the best recording mode available automatically to complete recording the program.



- "Auto" is only available for one program in the timer program list.

Alternate recording (DVD only)...

If there is no recordable disc in the unit, if the disc does not have enough space to complete the recording, or if the material is "copy-once" program and prohibited to be recorded on a DVD in the unit, the unit will detect it and automatically record to the HDD even when DVD is selected as the recording media. If the available space on the HDD is less than that of DVD, the unit will not perform the alternate recording. This feature is available only for timer recording. Not available for one-touch timer recording.

8 Press [ENTER] when all items are entered.

Your program setting will be stored.

- To set another program, repeat steps 2 to 8.
- To exit, press [TIMER PROG.] or [SETUP].
- When 2 or more programs are overlapped, "Timer program overlapped" appears, and the overlapped program will be displayed in blue. To correct the timer program refer to "Checking, canceling, or correcting the timer programming information" on page 51.

TIMER RECORDING

How to select a channel number for the timer recording

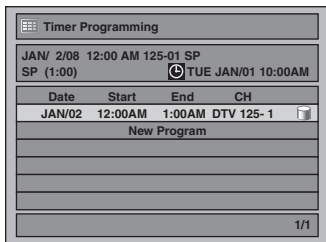
Analog TV	For channel number 2-6, press [▶] or [–] to decide the channels. For other channels (7-69), the channel will be decided as soon as you enter the channel number.
Analog CATV	For channel number 1-12, press [▶] or [–] to decide the channels. For other channels (13-125), the channel will be decided as soon as you enter the channel number.
Digital TV	For major channel number 1-9, press [▶] or [–] to decide the major channels. For other major channels (10-99), the major channel will be decided as soon as you enter the major channel number.
Digital CATV	For major channel number 1-13, press [▶] or [–] to decide the major channels. For other major channels (14-135), the major channel will be decided as soon as you enter the major channel number.
minor channels	For channel number 1-9, press [▶] or [–] to decide the channels. For other channels (10-99), the channel will be decided as soon as you enter the channel number.

<Hint>

- You can decide the 1-digit channel number by pressing 0 first, then enter desired 1-digit channel number. e.g.) "5": [0]+[5]
- For selecting the channels with [▲ / ▼], you need to press [▶] or [–] to decide the channel number.
- For selecting the minor channels with [▲ / ▼], please make sure the minor channel you are selecting is existing. [▲ / ▼] does not skip the non-existed minor channels.

Checking, canceling, or correcting the timer programming information

- 1) Press [POWER].
- 2) Press [TIMER PROG.].
- 3) Check the information on the list you want to edit.



4-A) To delete the timer program:

- 1 Use [▲ / ▼] to select the program you want to delete, then press [ENTER].
- 2 Use [▲ / ▼] to select "Delete", then press [ENTER].
- 3 Use [▲ / ▼] to select "Yes", then press [ENTER].

4-B) To correct the timer program:

- 1 Use [▲ / ▼] to select the program you want to correct, then press [ENTER].
- 2 Use [▲ / ▼] to select "Program Change", then press [ENTER].
- 3 Correct the timer program by using [▲ / ▼ / ◀ / ▶], then press [ENTER].

- 5) Press [TIMER PROG.] to exit.

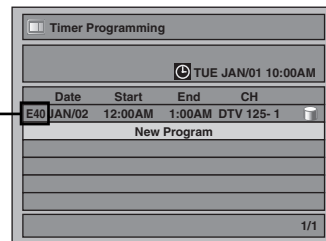
To stop the timer recording in progress

Press [■ STOP] on the front panel of the unit or press and hold [STOP ■] on the remote control for 2 seconds.

Note

- Press [TIMER PROG.] to check the timer recording in progress.

If the timer program did not complete correctly, the error number appears in the timer programming list.



Each error number means:

E1-22 E37-39	Recording error other than below
E25-26	Copy prohibited program
E30	Disc full
E40	Some portion has not been recorded because of program overlapping. Recording did not start at the start time.
E41	Power failed
E47	Already 600 titles recorded on the HDD
E49	There was no disc space on the HDD at the starting time for the HDD timer recording.
E50	HDD recording is canceled due to the insufficiency of the disc space on the HDD.

- E23-24, E27-29, E31-36, E42-46 and E48 are not displayed.
- A program with the error number is grayed in the timer programming list.
- Once the timer programming list with error line(s) is displayed, or after canceling and setting again the timer standby mode, the program line(s) with error will be cleared.

TIMER RECORDING

Hints for Timer Recording

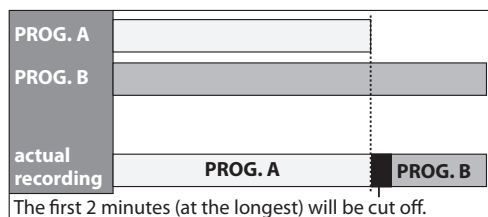
- If there is a power failure or this unit has been unplugged for more than 30 seconds, the clock setting and all timer programming will be lost.
- When recording to a DVD, if a disc is not inserted, the unit will perform the alternate recording to the HDD (refer to page 50).
- When a timer recording is completed, the unit will ask you whether to turn off the unit if there is no timer recording which starts within 5 minutes, except under conditions listed below.
 - During playback of HDD or DVD.
 - While displaying menus or information on the screen.
- The unit will be turned off automatically if you select "Yes" or if you do not reply in 1 minute.
- When the programmed starting and ending time are earlier than the current time, the setting will not be accepted and be cleared for redoing.
- If the starting time is earlier and the ending time is later than the current time, the recording will start right after you press **[ENTER]** at step 8 on page 50.
- You cannot change the audio language for the timer recording of digital TV broadcasting.
- Timer recording whose recording time exceeds 12 hours cannot be made.
- It is prohibited to turn off the unit from 4 minutes before the programmed starting time.
- It is prohibited to change channel from 15 seconds before the programmed starting time.
- **[REC/OTR]** does not work from 2 minutes before the programmed starting time. If it comes to 2 minutes before the starting time during regular or one-touch timer recording, the recording in progress will be stopped.
- Playback of DVD/CD is prohibited from 2 minutes before the programmed starting time when the recording media is DVD. If it comes to 2 minutes before the programmed starting time during DVD/CD playback, the playback will be stopped.

The Priority of Overlapped Settings

- Timer program which has the earlier start time will be placed first in the timer program list, and be given priority over the programs with the later start time when timer programs overlap.
- When timer programs overlap, the first 2 minutes (at the longest) of the later recording will be cut off.
- When 2 or more timer programs have the same start time, the program set first will be given priority.
- A timer recording of lower priority will be canceled or start from the middle.
- Check the overlapped timer programmings and change the priority if necessary.

■ When the starting time is the same:

A program set previously (PROG. A) has priority.

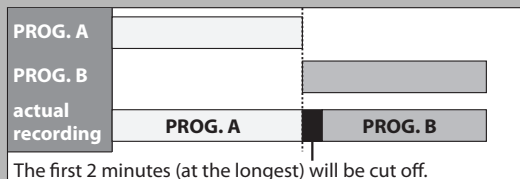


Note for DVD recording

- When the recording time of 2 programs are overlapped, or the end time of a program and the start time of another program is the same, the first 2 minutes (at the longest) of the subsequent program will be cut off.
- If the cut-off portion comes up to 3 minutes or more, this program will be displayed with errors number E40 in the timer programming list.

■ When the end time of the programming currently being recorded and the start time of the subsequent program are same:

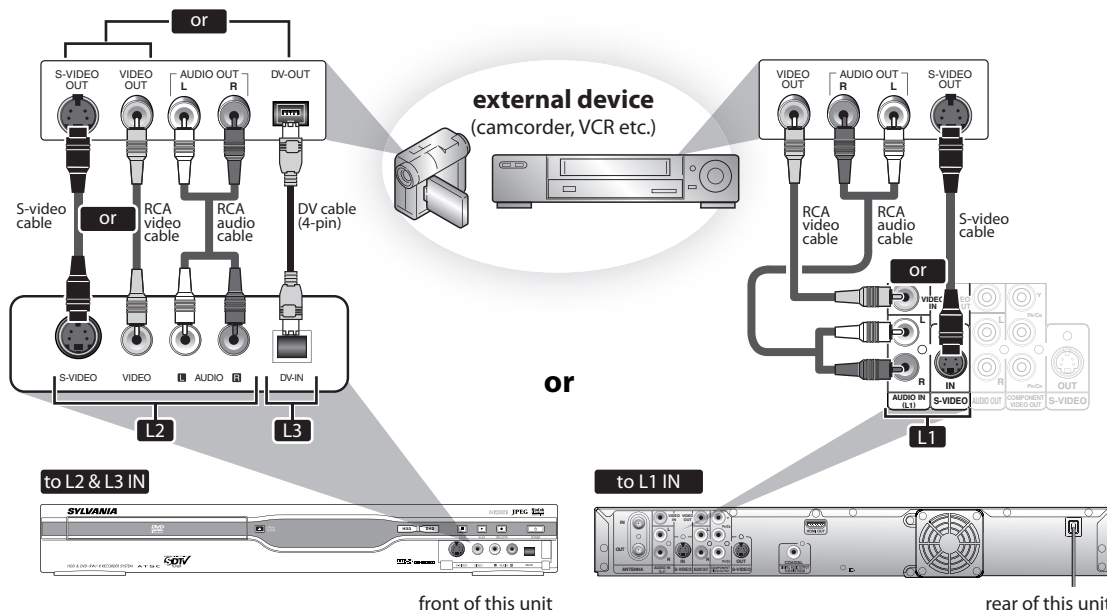
The beginning of the PROG. B may be cut off.



SETTINGS FOR AN EXTERNAL DEVICE

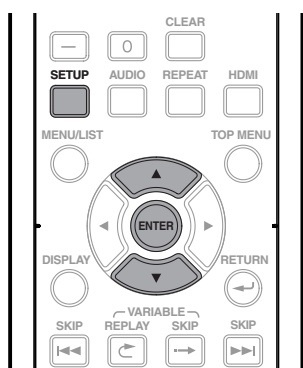
Connection to an External Device

Connect the external device properly to the unit by using input jacks either L2 and L3 (Front) or L1 (Rear).
When connecting an external device of monaural output to this unit, use AUDIO L jack of L1 (Rear) or L2 (Front).
Use S-video or the RCA audio/video cables for this connection.
When connecting a DVC (digital video camcorder), use DV-IN jack of L3 (Front).



Supplied cables used in this connection are as follows:

- RCA audio cable (L/R) x 1
 - RCA video cable x 1
- Please purchase the rest of the necessary cables at your local store.



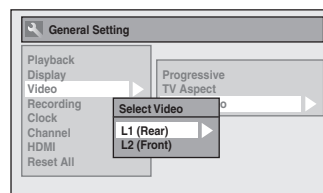
1 Press [SETUP].

2 Use [▲ / ▼] to select "General Setting", then press [ENTER].

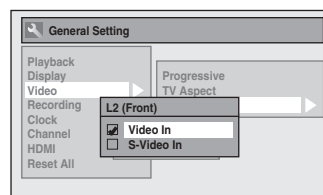
3 Use [▲ / ▼] to select "Video", then press [ENTER].

4 Use [▲ / ▼] to select "Select Video", then press [ENTER].

5 Use [▲ / ▼] to select desired external input position, then press [ENTER].



6 Use [▲ / ▼] to select the input jack type to connect, then press [ENTER].
If you want to use VIDEO IN jack, select "Video In".
If you want to use S-VIDEO IN jack, select "S-Video In".



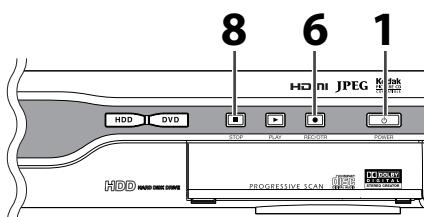
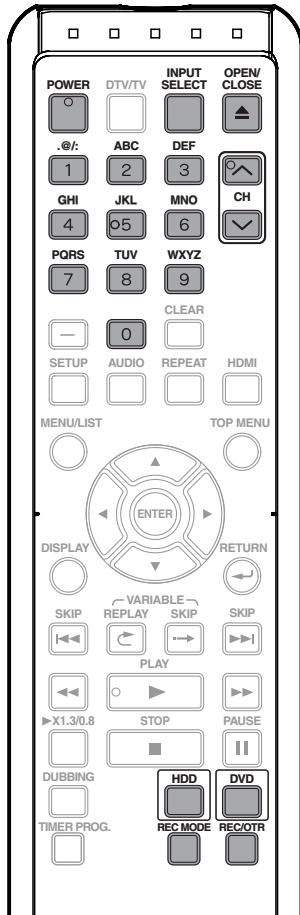
7 Press [SETUP] to exit.

SETTINGS FOR AN EXTERNAL DEVICE

Recording from an External Device



Before recording from an external device, refer to the instructions for the connection on page 53.



1 Turn on the TV and press [POWER], and be sure to select the input of the TV to which the unit is connected.
If you are recording to the HDD, press [HDD], then proceed to step 4. If you are recording to a disc, press [DVD].

2 Press [OPEN/CLOSE ▲] to open the disc tray. Place the disc to record on properly.

3 Press [OPEN/CLOSE ▲] to close the disc tray.

It takes awhile to load the disc.

4 Select the input of the unit to which the external device is connected. (L1, L2 or L3)

- To use the input jacks on the rear of this unit; Select "L1" by using [INPUT SELECT] or [CH ▲ / ▼].
- To use the input jacks on the front of this unit; Select "L2" or "DV" by using [INPUT SELECT] or [CH ▲ / ▼].
- You can also select "L1" or "L2" by using [the Number buttons].
 - For L1, press [0], [0], [1].
 - For L2, press [0], [0], [2].

5 Press [REC MODE] to select a recording mode.
Refer to "Recording Mode" on page 44.

6 Press [● REC/OTR] on the front panel to start recording.

7 Start playback on the external device to record from.

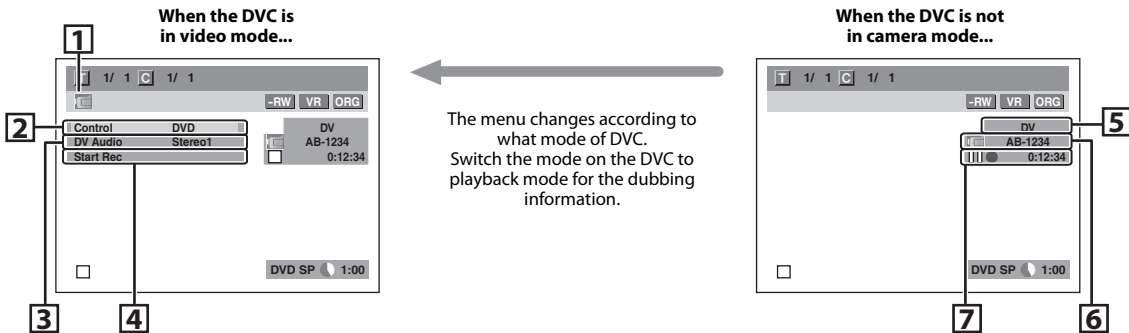
8 Press [■ STOP] on the front panel to stop recording.

This operation may take awhile to be completed.

Guide to DV and On-Screen Display

This function helps you to easily dub the contents of the DVC (digital video camcorder) to HDD or DVD.

You can control basic operations of the DVC from the remote control of this unit such as playback, fast forward or reverse and stop all operations if the DVC is in video mode. Use the DV cable that has 4-pin input jack and is compliance with the IEEE1394 standards. When you connect to DV-IN jack on the front of this unit, select "DV" position by using **[INPUT SELECT]** or **[CH ^ / ∨]** on the remote control and press **[DISPLAY]** to show the DV dubbing information for the operation of your DVC.



The following instructions are described with the operations using the remote control of this unit.

1. DV icon

2. Indicator of active device

- When the "Control" is highlighted, press **[ENTER]** to display the item selection. Use **[▲ / ▼]** to select the device you wish to operate, then press **[ENTER]** to activate.
- Select "HDD" / "DVD" to control this unit.
- Select "DVC" to control your DVC.

3. Recording audio mode

- Other than the DVC is in stop mode, the "DV Audio" can be selected. Press **[ENTER]** to display the item selection and then use **[▲ / ▼]** to select the audio you wish to output. Press **[ENTER]** again to activate.
- Select "Stereo1" to dub the stereo sound.
- Select "Stereo2" to dub the sound with after recording sound.
- Select "Mix" to dub the stereo1 and stereo2.

4. Indicator of dubbing function

- When the unit is ready for dubbing, "Start Rec" will appear.
- When the unit is in dubbing, "Pause Rec" will appear.

5. Channel position

- When you select "DV" by using **[INPUT SELECT]** or **[CH ^ / ∨]**, "DV" will appear.

6. Product name of your DVC

- If the unit cannot recognize the input signal from the DVC or the unknown product, "No Device" or "*****" will appear instead.

7. Status of the current operation and the time counter

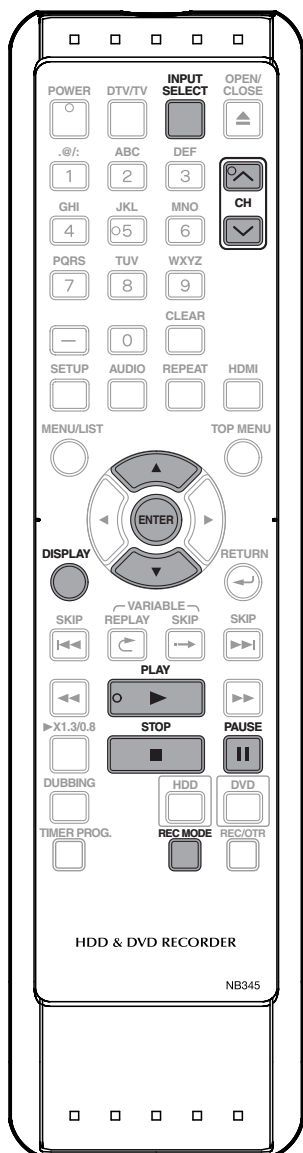
Each icon means (Available icons may vary depending on the DVC):

- | | | | |
|--|---|--|--|
| | DVC is in stop mode. | | DVC is fast forwarding. (in stop mode) |
| | DVC is in playback mode. | | DVC is fast reversing. (in stop mode) |
| | DVC is in pause mode. | | DVC is fast reversing. (standard speed) |
| | DVC is fast forwarding. (standard speed) | | DVC is fast reversing. (faster than above) |
| | DVC is fast forwarding. (faster than above) | | DVC is fast reversing. (faster than above) |
| | DVC is fast forwarding. (faster than above) | | DVC is in slow reverse playback. |
| | DVC is slow forwarding. (standard speed) | | DVC is in recording. |
| | DVC is slow forwarding. (faster than above) | | DVC is in recording pause mode. |
| | DVC is slow forwarding. (faster than above) | | |

DVC to HDD/DVD Dubbing



Before recording from DVC, see page 53 for connection instructions.



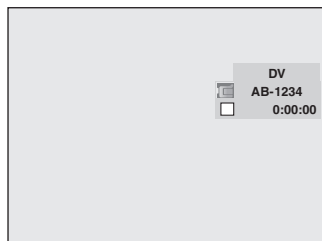
Preparing for DV dubbing (DVC to HDD):

- Make sure your DVC is in video mode.

Preparing for DV dubbing (DVC to DVD):

- Insert a recordable DVD.
- Make sure your DVC is in video mode.

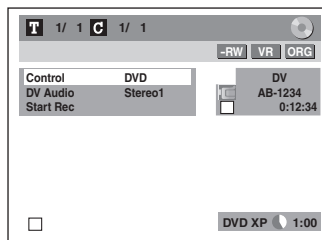
1 Use [INPUT SELECT] or [CH ^ / v] to select "DV".



2 Press [REC MODE] to select a recording mode. (Refer to page 44.)

3 Press [DISPLAY].

4 Press [ENTER] to display the item selection. Use [▲ / ▼] to select "DVC", then press [ENTER].



5 Press [PLAY ►] to find where you wish to start dubbing. Then, press [STOP ■] where you wish to start dubbing.

6 Use [▲ / ▼] to select "Start Rec", then press [ENTER]. The dubbing will start.

7 To stop dubbing; Use [▲ / ▼] to select "Control", then press [ENTER]. Use [▲ / ▼] to select "HDD" / "DVD", then press [ENTER]. Then press [STOP ■].

Note for DV dubbing

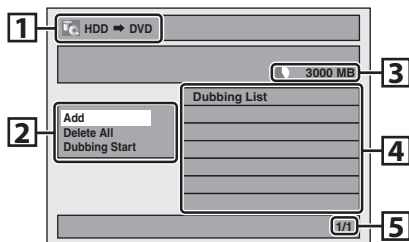
- If you press **[PAUSE II]** at step 5, the tape will rewind to the point a few seconds preceding the paused point. When you press **[ENTER]** at step 6, then, it will start dubbing when it comes to the paused point.
- The unit does not send out the output signal to DVC.
- For the proper operation, connect DVC to the unit directly. Do not connect this unit and DVC via any other unit.
- Do not connect more than 1 DVC.
- The unit can only accept DVC. Other DV device such as cable/satellite box or D-VHS VCR cannot be recognized.
- If no video signal is detected from the DVC during DVC to HDD or DVD dubbing, the recording will be paused and "●" will flash on the TV screen. The recording will resume when the unit detects the video signal again.
- When the DVC is in camera mode, refer to "Guide to DV and On-Screen Display" on page 55.
- Date / time and cassette memory data will not be recorded.
- Pictures with a copy-guard signal cannot be recorded.
- A DV terminal is a terminal that can use the transmission mode conforming to the IEEE 1394 standards called "Fire Wire". It serves as the interface that connects the PC and peripheral device such as "i.Link" (registered trademark of SONY). It enables digital dubbing between DV devices with little degradation.
- You cannot dub from DVC to both HDD and DVD at the same time.

DUBBING

Information on Dubbing

You can dub the contents of the HDD to DVD or vice versa. Before you start dubbing, refer to pages 10-11 to see the recording compatibility.

Guide to Dubbing Menu Display



- 1 Dubbing direction
- 2 Dubbing menu
- 3 Remaining recordable space
- 4 Dubbing list
- 5 Current page number / total number of pages

Recording Mode for Dubbing

“High”

This unit is compatible with the high speed dubbing from HDD to DVD or from VR mode DVD-RW to HDD.

With the high speed dubbing you can dub a title much faster than the normal speed dubbing without changing the quality of the picture and sound. (e.g. If you dub a title recorded in SLP mode to DVD-R, dubbing speed will be 32 times faster than the normal dubbing.) To perform the high speed dubbing, set the recording mode to “High”.

- Duration of high speed dubbing will vary depending on the recording mode or the title amount.
- High speed dubbing is not available when;
 - recording mode is set to other than “High”.
 - dubbing from a video mode DVD-RW/-R to the HDD.
 - there is not enough space in the disc or HDD.
- High speed dubbing of an HDD title which has bilingual audio is only available to VR mode DVD-RW disc.

“Auto”

When “Auto” is selected as a recording mode, the unit calculates how much time is available on the disc and selects the best recording mode available automatically.

- The recording may be cut short when the available recording space of the disc is too limited.

Note on dubbing

- During normal dubbing, you can watch the playback picture of the title being dubbed (the audio cannot be changed). During high speed dubbing, the playback picture will not appear.
- Dubbing of a copy-once programs are only available when you dub HDD to DVD-RW disc with Content Protection for Recordable Media (CPRM) formatted in VR mode, and in this case, the programs does not remain on the HDD.
- If you stop the dubbing halfway, the contents will be dubbed up to the point where you stop the dubbing (except for the high speed dubbing). With high speed dubbing, nothing will be dubbed if you stop it halfway.
- To stop the dubbing in progress, press [■ STOP] on the front panel or press [STOP ■] for 2 seconds on the remote control. If you stop the high speed dubbing or stop the dubbing a copy-once programs, confirmation message appears. Select “Yes” using [▲ / ▼], then press [ENTER] to proceed.

Other recording modes

Refer to page 44 for the information on other recording modes.

Before Starting Dubbing

HDD to DVD / DVD to HDD

You can copy the contents between HDD and DVD.

Limitation (DVD to HDD):

- If a copy control signal is detected during dubbing, the dubbing will be stopped.

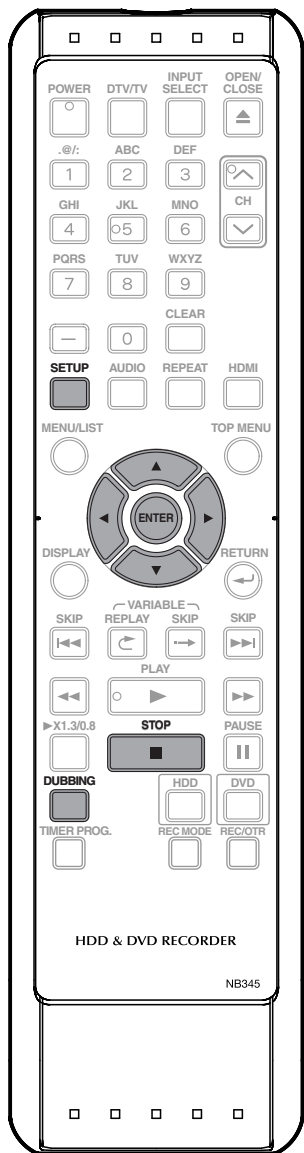
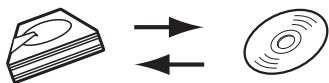
Preparing for dubbing (HDD to DVD):

- Insert a recordable DVD.

Preparing for dubbing (DVD to HDD):

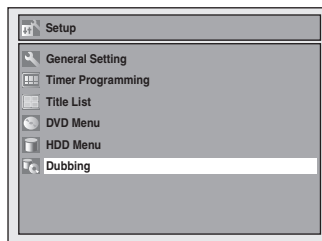
- Insert a disc to be dubbed.
- Discs dubbed with other devices may not be dubbed.

Selected Title Dubbing



1 Press [SETUP] in stop mode.

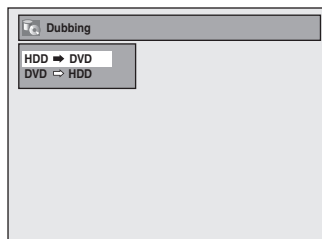
2 Use [▲ / ▼] to select “Dubbing”, then press [ENTER].



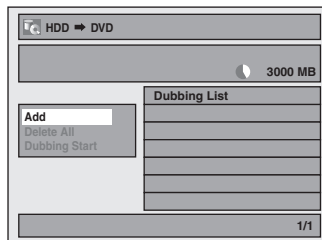
3 **HDD to DVD**
Use [▲ / ▼] to select “HDD → DVD”, then press [ENTER].

DVD to HDD

Use [▲ / ▼] to select “DVD → HDD”, then press [ENTER].
e.g.) HDD → DVD



4 Use [▲ / ▼] to select “Add”, then press [ENTER].



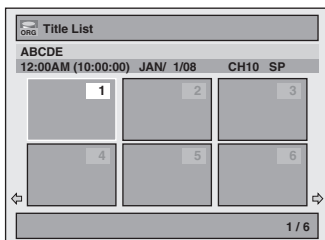
- If you have registered any dubbing before, they will be listed in the dubbing title list.

Note

- Dubbing will be cancelled 2 minutes before starting timer recording.

Instructions continue on the next page.

- 5** Use [▲ / ▼ / ◀ / ▶] to select a desired title, then press [ENTER].
e.g.) HDD Original



The title is now registered in the dubbing list.

- 6** Repeat steps 4 to 5 until you register all the titles to be dubbed.

To delete a title:

- 1 Go to the dubbing list, then use [▲ / ▼] to select a title. Then press [ENTER].
- 2 Use [▲ / ▼] to select "Delete", then press [ENTER].
- 3 Use [▲ / ▼] to select "Yes", then press [ENTER].

To move a title:

- 1 Go to the dubbing list, then use [▲ / ▼] to select a title. Then press [ENTER].
- 2 Use [▲ / ▼] to select "Move", then press [ENTER].
- 3 Use [▲ / ▼] to select a desired insert point, then press [ENTER].

To erase all the titles in the dubbing title list:

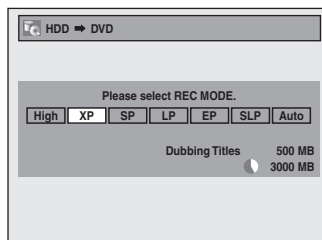
- 1 Use [▲ / ▼] to select "Delete All" in the dubbing menu, then press [ENTER].
- 2 Use [▲ / ▼] to select "Yes", then press [ENTER].
- 3 Use [▲ / ▼] to select "Yes", then press [ENTER].

Final confirmation message will appear.

- To go back and forth between dubbing menu and dubbing list, use [◀ / ▶].

- 7** After adding all the titles you want, use [▲ / ▼] to select "Dubbing Start" in the dubbing menu, then press [ENTER].

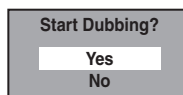
- 8** Use [◀ / ▶] to select a desired recording mode, then press [ENTER].
e.g.) HDD → DVD



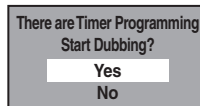
Confirmation message will appear.

- When dubbing from HDD to DVD or from VR mode DVD-RW to HDD, you can select "High" to perform the high speed dubbing (refer to "Recording Mode for Dubbing" on page 58 for more details).

- 9** Use [▲ / ▼] to select "Yes", then press [ENTER].



If dubbing continues when timer recording starts, the next display will appear.



Dubbing will start.

- It may take awhile to prepare for the dubbing.

To stop the dubbing in progress:

Press [■ STOP] on the front panel.

Press [STOP ■] for 2 seconds on the remote control.

One-touch Dubbing...

With one-touch dubbing, you can start dubbing right away with just one touch.

To dub the contents in a DVD which is finalized on other unit, use this function.

During playback of the title you want to dub, press [DUBBING].

If you are playing back a DVD, DVD to HDD dubbing will start right away.

If you are playing back HDD, HDD to DVD dubbing will start right away.

- The dubbing will start from the beginning of the title being played back.
- The unit will dub only the title being played back.
- When dubbing from HDD to DVD or VR mode DVD-RW to HDD, recording mode will automatically be set to "High" whenever the conditions are met. (See page 58.)
- If the high speed dubbing is not available, the title will be dubbed in normal speed with the recording mode of the title.

To stop the dubbing in progress:

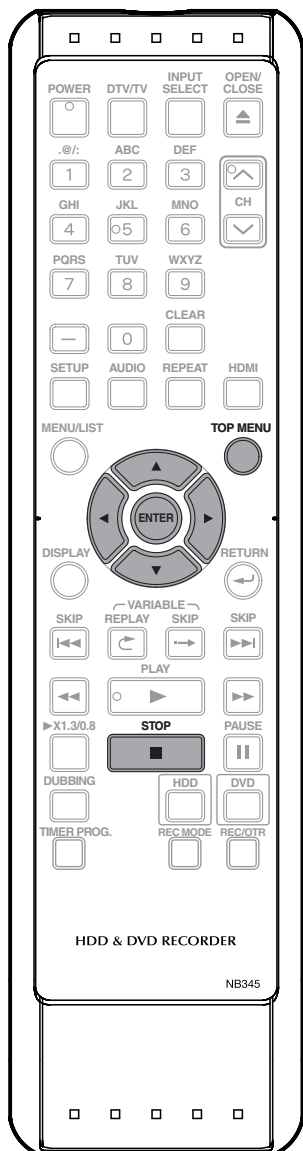
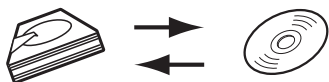
Press [■ STOP] on the front panel.

Press [STOP ■] for 2 seconds on the remote control.

One-Title Dubbing between HDD and DVD



This function lets you select one specific title from the title list for dubbing.



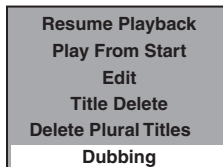
If you are dubbing a title in the HDD, press [HDD] first.

If you are dubbing a title in a disc, press [DVD] first.

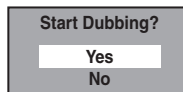
1 Press [TOP MENU].

2 Use [▲ / ▼ / ◀ / ▶] to select a desired title to dub, then press [ENTER].

3 Use [▲ / ▼] to select "Dubbing", then press [ENTER].
e.g.) HDD Playlist



4 Use [▲ / ▼] to select "Yes", then press [ENTER].



Dubbing of the selected title will start.

To stop the dubbing in progress:

Press [■ STOP] on the front panel.

Press [STOP ■] for 2 seconds on the remote control.

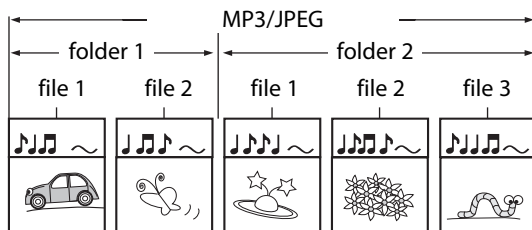
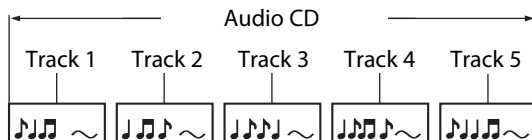
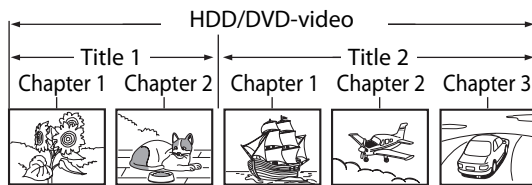
INFORMATION ON PLAYBACK

Structure of Disc Contents

The contents of HDD/DVD are generally divided into titles, and the titles are subdivided into chapters.

Audio CDs are divided into tracks.

Data disc contains MP3/JPEG are divided into folders, and the folders are subdivided into files.



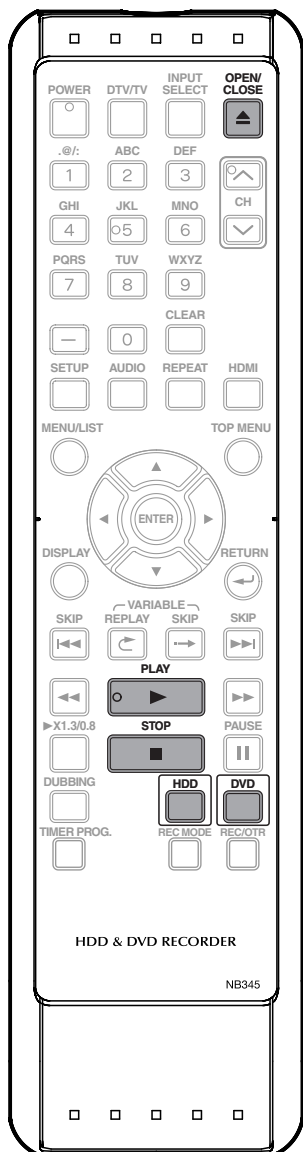
- Title: Divided contents of a DVD-video. Roughly corresponds to a story title in short stories.
- Chapter: Divided contents of a title. This corresponds to a chapter in a story.
- Track: Divided contents of an audio CD.
- Folder: Divided contents of a MP3/JPEG data disc. Consists of the number of files.

Each title, chapter, or track, folder or file is assigned a number, which is called "title number", "chapter number", "track number", "folder number" or "file number" respectively.

Some discs may not have these numbers.

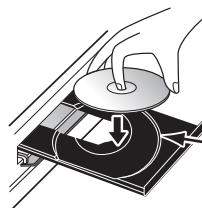
BASIC PLAYBACK

Direct Playback



If you are playing back the titles in HDD, press **[HDD]** first, then proceed to step 3.
If you are playing back the titles in DVD, press **[DVD]** first.

- 1 Press [OPEN/CLOSE ▲] to open the disc tray and insert your disc with its label facing up.**



Align the disc to the disc tray guide.

- 2 Press [OPEN/CLOSE ▲] to close the disc tray.**

It may take awhile to load the disc completely.

- 3 Press [PLAY ►] to start playback.**
If you are playing back a DVD-video, a menu may appear.
Refer to "Using the Title/Disc Menu" on page 66.

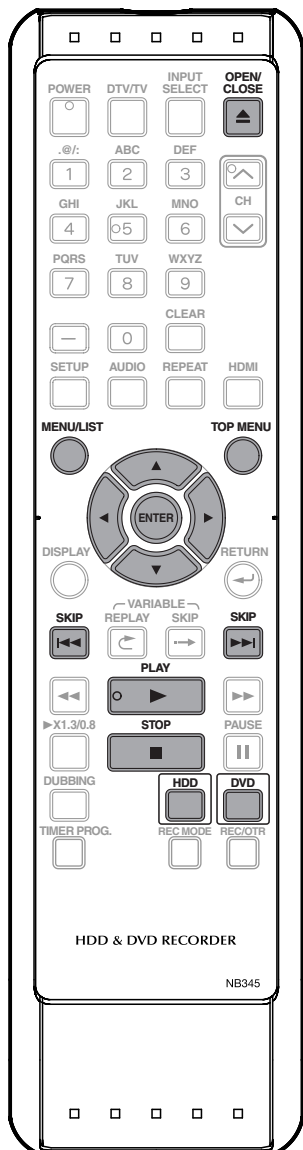
- 4 Press [STOP ■] once to stop playback temporarily.**
• Refer to "Resume Playback" on page 67.

Note

- Some discs may start playback automatically.

BASIC PLAYBACK

Playback from the Title List



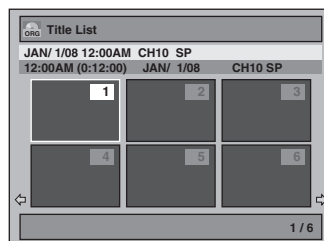
If you are playing back the titles in HDD, press **[HDD]** first, then proceed to step 2.
If you are playing back the titles in DVD, press **[DVD]** first.

1 Follow steps 1 to 2 in “Direct Playback” on page 63.

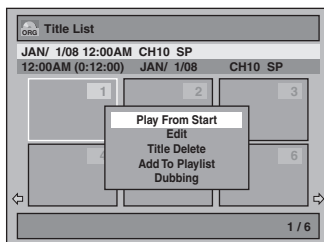
2 For HDD, press **[TOP MENU]** to call up the title list. For DVD, the title list will automatically appear when you insert a disc. Otherwise, press **[TOP MENU]** or **[MENU/LIST]**.

- To exit the title list, press **[STOP ■]**.
- To resume the title list, press **[TOP MENU]**.

3 Use **[▲ / ▼ / ◀ / ▶]** to select a desired title, then press **[ENTER]**.
e.g.) VR mode DVD-RW original



4 Use **[▲ / ▼]** to select “Play From Start”, then press **[ENTER]**.



Playback will start.

- For title in the HDD, you can also select “Resume Playback” to play from the resume points.

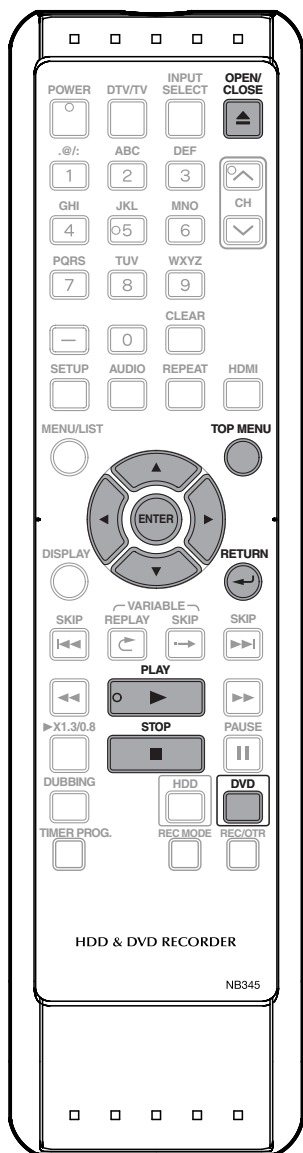
5 Press **[STOP ■]** once to stop playback temporarily.

- Refer to “Resume Playback” on page 67.
- To eject the disc, press **[OPEN/CLOSE ▲]** to open the disc tray, then remove the disc before turning off the unit.

Note

- Some discs may start playback automatically.
- You can also start playback by pressing **[PLAY ▶]** instead of **[ENTER]** at step 4.
- At step 3, you can press **[SKIP ▶▶]**, or press **[▶]** when the title on the lower right of the title list is highlighted to display the next page, and press **[SKIP ◀◀]**, or press **[◀]** when the title on the upper left of the title list is highlighted to display the previous page.

Playing Back an Audio CD and a CD-RW/-R with MP3/JPEG Files



Note

- The audio source of MP3 files cannot be recorded as digital sound by an MD or DAT deck.
- Files whose extension is other than ".mp3(MP3)" or ".jpg / .jpeg(JPEG)" will not be listed.
- Some unplayable folders or files may be listed due to the recording status.
- High-resolution JPEG files take longer to be displayed.
- Progressive JPEG files (JPEG files saved in progressive format) cannot be played back on this unit.
- The JPEG pictures can also rotate by using [◀/▶].

1 Press [DVD] first.
Follow the step 1 in "Direct Playback" on page 63.

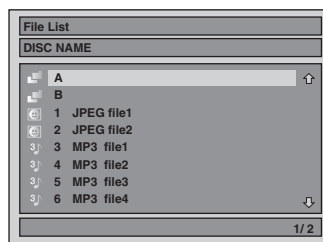
2 Press [OPEN/CLOSE ▲] to close the disc tray.

It may take awhile to load the disc completely.

File list will appear automatically.

- To exit the file list, press [STOP ■].
- To resume the file list, press [TOP MENU].

3 Use [▲ / ▼] to select a desired folder or track/file, then press [ENTER].



When selecting track/file:

Playback will start.

When selecting folder:

The files in the folder will appear.

Use [▲ / ▼] to select the file or folder you want to play back, then press [ENTER].

- Press [PLAY ▶], [ENTER] or [▶] to move to any lower hierarchies.
- Press [◀] or [RETURN ◀] to move back to the previous hierarchy.

Hints for audio CD tracks and MP3/JPEG files:

- Folders are shown by [Folder Icon].
- Audio CD tracks are shown by [CD Icon].
- MP3 files are shown by [MP3 Icon].
- JPEG files are shown by [JPEG Icon].
- The system can recognize up to 255 folders and, up to 99 tracks/999 files.
- Letters of a file/folder name overflowing the given space will be displayed as "...".
- If there are no files in the folder, "No Files" will be displayed.

It is recommended that files to be played back in this unit are recorded under the following specifications:

<MP3>

- Sampling frequency : 44.1 kHz or 48 kHz.
- Constant bit rate : 112 kbps - 320 kbps

<JPEG>

- Upper limit : 6,300 x 5,100 dots.
- Lower limit : 32 x 32 dots.
- File size of image maximum : 12 MB.

BASIC PLAYBACK

Playing Back an Audio CD and a CD-RW/-R with MP3/JPEG Files (cont'd)

Kodak Picture CD

The Picture CD is a service to convert photographs taken by a conventional film camera into digital data and write the data on a CD. You can enjoy picture images on the TV set by playing back the Picture CDs.

For details of Kodak Picture CD, contact a shop that provides developing service of Kodak Inc.

1) Press [TOP MENU].



- To exit the Picture CD thumbnail List, press [TOP MENU] again or press [STOP ■]. Arrow icons mean the title list includes a next or previous page. Use [◀/▶] in the direction of the icon you wish to follow. You can also quick review the six thumbnails at once between the first and last pages by pressing [SKIP ◀◀/▶▶].

2) Use [▲ / ▼ / ◀ / ▶] to select a desired track to be played back, then press [PLAY ▶] or [ENTER].

An image will be played back from the selected track and go to the next one in turn.

3) Press [STOP ■] to stop playback.

Notes on JPEG and Kodak Picture CD:

- After track is displayed for 5 seconds or 10 seconds (set in the "Slide Show" on page 73) the display moves to the next track.
- During JPEG or Kodak Picture CD playback, press [▶] or [◀] to rotate a picture 90 degrees clockwise or counterclockwise respectively.
(Not available when the display menu appears.)

Using the Title/Disc Menu



DVD may contain a title list, which describes the contents of the disc, or a disc menu, which guides you through the available functions in the disc.

1) Press [TOP MENU] or [MENU/LIST] to call up the title list or disc menu.

2) Use [▲ / ▼ / ◀ / ▶] to make a selection, and then press [ENTER] to enable your selection.

3) Press [STOP ■] to exit the disc menu.

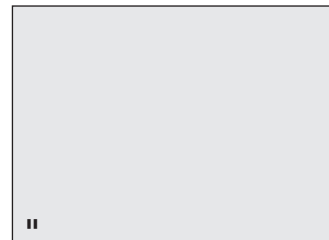
Note

- You can select a numbered menu with [the Number buttons] also.
- Menus vary among discs. Refer to the information accompanying the disc for details.
- [MENU/LIST] or [TOP MENU] will not always be effective for all DVDs.

Pause

1) During playback, press [PAUSE II].

Playback will be paused and sound will be muted.



2) Press [PLAY ▶] to return to normal playback.

Note

- For DVD, set "Still Mode" to "Field" in "Playback" menu if pictures in the pause mode are blurred. (Refer to page 98.)

Resume Playback

You can play back from where you stopped playing back the disc last.

1) During playback, press [STOP ■].

The resume message will appear.

Resume ON

2) Press [PLAY ►].

In a few seconds, playback will resume from the point at which it stopped last. You can resume playback at the same point even if you turn off the unit.

To cancel the resume playback and start playing back the disc from the beginning, press [STOP ■] again while the playback is stopped.

Note

- For MP3/JPEG files, playback will resume from the beginning of the file at which playback was stopped.
- For HDD, you can set a resume point per every title.
- For title in the HDD, you can also play from the resume point by selecting "Resume Playback" at step 4 of "Playback from the Title List" on page 64.

Fast Forward / Fast Reverse Playback



1) During playback, press [FWD ►►] or [REV ◀◀].

Every time you press [FWD ►►] or [REV ◀◀], approximate speed will be changed as follows.

Fast forward or fast reverse playback across titles (for DVD), or files (for MP3 files) is not possible.



For audio CD, MP3 files, approximate speed is fixed at 8x with sound.

2) Press [PLAY ►] to return to normal playback.

Note

- Forward/reverse speed will be indicated with icons as follows.

forward (approx. speed)

2x: ►►
20x: ►►►
40x: ►►►►

reverse (approx. speed)

5x: ◀◀
20x: ◀◀◀
40x: ◀◀◀◀

Variable Skip / Variable Replay



During playback, you can skip forward or backward by the amount of time you set in "Playback" menu. To set the time amount, refer to "[8] Variable Skip / Replay" on page 98.

During playback, press [VARIABLE SKIP →] if you want to skip forward. Press [VARIABLE REPLAY ◀] if you want to skip backward.

Rapid Playback



Rapid playback function is available only during playback.

This function is available only on discs recorded in the Dolby Digital format, and plays back in a slightly faster/slower speed while keeping the sound output.

1) During playback, press [►x1.3/0.8].

- ♪: Press [►x1.3/0.8] once during playback. Plays back approximately at 0.8 times of normal playback.
- ♪♪: Press [►x1.3/0.8] twice during playback. Plays back approximately at 1.3 times of normal playback.
- : Press [►x1.3/0.8] thrice to play back in normal speed. No effects.

2) Press [PLAY ►] to return to normal playback.

Note

- Audio (language) setting cannot be changed while using this mode.
- This feature may not work at some point in a disc.
- Audio is LPCM (2 channel) during rapid playback.

Step by Step Playback



1) During playback, press [PAUSE II].

Playback will be paused and sound will be muted.

2) Press [SKIP ►►►] repeatedly.

Playback will advance one frame at a time when you press [SKIP ►►►] with the sound muted.

To play back step by step backward:

Press [SKIP ◀◀◀] repeatedly.

Every time you press the button, the playback will go backward by one frame.

- Press and hold [SKIP ◀◀◀] / [SKIP ►►►] to reverse/advance continuously.

3) Press [PLAY ►] to return to normal playback.

SPECIAL PLAYBACK

Slow Forward / Slow Reverse Playback



1) During playback, press [PAUSE ■■]. Then press [FWD ►►] or [REV ◄◄].

Every time you press [FWD ►►] or [REV ◄◄], approximate speed will be changed as follows. (The sound will remain muted.)



2) Press [PLAY ►] to return to normal playback.

Note

- Forward/reverse speed will be indicated with icons as follows.

forward (approx. speed)

1/16x: ►►►

1/8x: ►►►►

1/3x: ►►►►►

reverse (approx. speed)

1/16x: ◄◄◄

1/8x: ◄◄◄◄

1/4x: ◄◄◄◄◄

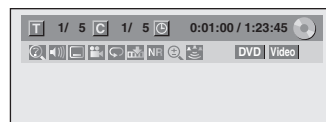
Zoom



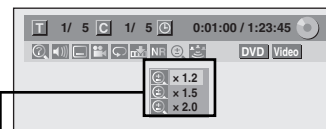
1) During playback, press [DISPLAY].

2) Use [◄ / ►] to select , then press [ENTER] within 1 second, or wait for 1 second to display the selection menu.

e.g.) DVD-video



3) Use [▲ / ▼] to select a desired zoom factor to zoom, then press [ENTER].



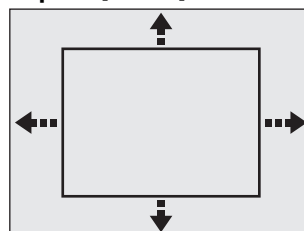
Zoom menu will appear.

There are four options

(x1.0, x1.2, x1.5 and x2.0), these are displayed excluding the current zoom rate.

Zoom area will be displayed.

4) Use [▲ / ▼ / ◄ / ►] to select a desired zoom position, then press [ENTER].



Zoom playback will start.

Note


- When selecting a smaller factor than the current one, the zoom area will not be displayed.
- To exit the zoom menu, press [DISPLAY] repeatedly.
- To cancel the zoom function, select "x1.0" using [▲ / ▼], then press [ENTER] at step 3.
- You cannot slide the zoomed picture on some JPEG files.

Marker Setting

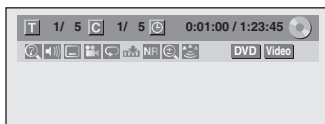


This feature allows you to assign a specific point on a disc to be called back later.

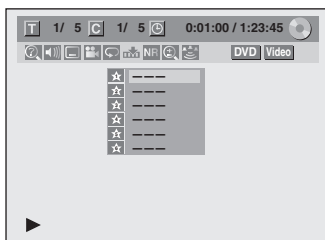
1) During playback, press [DISPLAY].

2) Use [◀/▶] to select , then press [ENTER] within 1 second, or wait for 1 second to display the marker list.

e.g.) DVD-video



3) Use [▲ / ▼] to select a desired marker number. When it reaches the desired point, press [ENTER].



The title (track) number and the time will be displayed.

4) To return to the marker:

Use [▲ / ▼] to select the desired marker number, then press [ENTER].

Note

- To clear a marker, select the marker number to be cleared, then press [CLEAR].
- All markers are erased when you perform the following operations.
 - Opening the disc tray (CD/DVD only)
 - Turning off the power (CD/DVD only)
 - Making additional recording on the disc (DVD only)
 - Editing any title (DVD only)
 - Dividing the title (HDD only)
 - Combining the title (HDD only)
 - Deleting a scene of the title (HDD only)
 - Changing the mode between Original and Playlist. (VR mode DVD-RW disc only)

Chasing Playback during Recording



You can play back a title being recorded from the beginning while recording continues.

1) During recording, press [PLAY ▶].

Playback of the title you are recording will start from the beginning.

- Elapsed playback time will be displayed in the front panel display.

2) Press [STOP ■] once to stop playback.

The front panel display will switch back to show the elapsed recording time.

If you press [STOP ■] twice, it will stop the recording.

Note

- You can also use the special playback functions such as [REV ◀◀], [FWD ▶▶] etc. during chasing playback mode.
- [REC/OTR] is invalid during chasing playback.
- You can no longer fast forward the playback when it comes to a few seconds before the current recording point.

Simultaneous Playback and Recording



With regard to HDD, you can continue recording a program while playing back another title in the same component (HDD).

To do so, press [TOP MENU] during recording and select a title you like to play back, and then press [PLAY ▶]. (You can also start the playback from the title list menu.)

To playback a title being recorded while continuing to record, refer to "Chasing Playback during Recording" on this page (available only with HDD).

Playing Back the Autostart Recording



By playing back the autostart recording, you can pause or go back the TV program you are currently watching. For the autostart recording refer to "AUTOSTART RECORDING" on page 48.

To pause and resume the TV program:

- 1) When watching TV program through this unit's tuner, press [PAUSE II].

TV program will be paused and sound will be muted.

- 2) Press [PLAY ►] to resume the TV program you were watching from where you have paused.

To go back the TV program:

When watching TV program through this unit's tuner, press [SKIP ◀◀], [REV ◀◀] or [VARIABLE REPLAY ◀].

- While playing back the autostart recording, pressing [SKIP ◀◀] or [SKIP ▶▶] skips playback point 5 minutes backward or forward.

To go back to the specific time:

- 1) When watching TV program through this unit's tuner, press [DISPLAY], then press [ENTER].

- 2) Use [▲ / ▼ / ◀ / ▶] or [the Number buttons] to enter a desired time, then press [ENTER].

- While playing back the autostart recording, press [STOP ■] to cancel the playback.
- When watching TV program or while playing back the autostart recording, press [DIPLAY] once to display the autostart recording information. Refer to "Autostart Recording Information" on page 23.
- Noise reduction, zoom and virtual surround functions are available while playing back the autostart recording.

Note

- While playing back the autostart recording, you cannot change the channels.
- While playing back the autostart recording, you cannot change the DTV audio language.
- If you change to DVD mode or if the timer recording starts while playing back the autostart recording, the playback will be stopped.
- When this unit turns on for the timer recordings, the autostart recording will not be performed.
- For the contents of the autostart recording, you cannot change the TV audio.

Title/Chapter Search



Using [SKIP ◀◀] / [SKIP ▶▶]

- 1) During playback, press [SKIP ▶▶] to skip the current title or chapter and move to the next.
The title or chapter will move forward by one at a time.
• If there is no chapter in one title, the current title will be skipped.


To go back to the beginning of the current title or chapter, press [SKIP ◀◀].

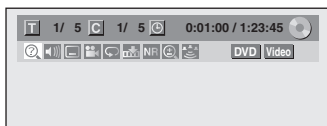
Press it twice in quick successions to go to the previous title or chapter. The title or chapter will move backward one title at a time.

Note

- With regard to HDD, chapter search using [SKIP ◀◀ / ▶▶] is available only within the same title.

Using [DISPLAY]

- 1) During playback, press [DISPLAY].
- 2) Use [◀ / ▶] to select , then press [ENTER].
e.g.) DVD-video



The number next to **T** will be highlighted.

3) Title:

Use [▲ / ▼] or [the Number buttons] to enter a desired title number to search, then press [ENTER].
Title search will start.

Chapter:

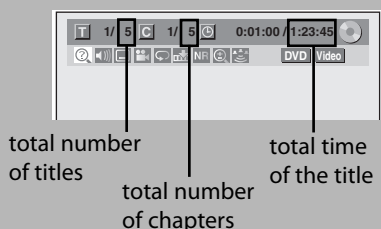
Press [▶] to move to the number next to **C** for chapter.

Use [▲ / ▼] or [the Number buttons] to enter a desired chapter number to search, then press [ENTER].

After the search, playback will start automatically.

Note

- In search mode display, total numbers of each search contents (title/chapter/time) are shown as a denominator.




Track Search

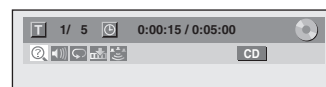


Using [SKIP ◀◀] / [SKIP ▶▶]

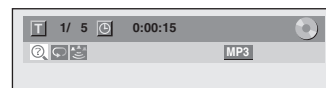
- 1) During playback, press [SKIP ▶▶] to skip the current track/file and move to the next.
The track/file will move forward one at a time.
To go back to the beginning of the current track/file, press [SKIP ◀◀].
Press it twice in quick successions to go to the previous track/file. The track/file will move backward one at a time.

Using [DISPLAY]

- 1) During playback, press [DISPLAY].
- 2) Use [◀ / ▶] to select , then press [ENTER].
e.g.) audio CD



e.g.) MP3 files



The number next to **T** will be highlighted.


- 3) Use [▲ / ▼] or [the Number buttons] to enter a desired track/file number to search, then press [ENTER].
After the search, playback will start automatically.

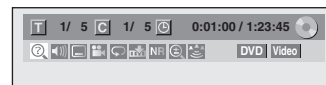
Note

- During CD playback, you can enter a track number directly using [the Number buttons] for track search without displaying the menu.

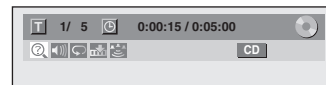
Time Search





- 1) During playback, press [DISPLAY].
- 2) Use [◀ / ▶] to select , then press [ENTER].
e.g.) DVD-video



e.g.) audio CD



The number next to **T** will be highlighted.
To move to the number next to , press [▶].
When time search is not available,  and time counter are not displayed.

- 3) Use [▲ / ▼ / ◀ / ▶] or [the Number buttons] to enter a desired time to search, then press [ENTER].
After the search, playback will start automatically.

Note

- Time search is available only in the same track, file or title.


REPEAT/RANDOM/PROGRAM PLAYBACK/SLIDE SHOW

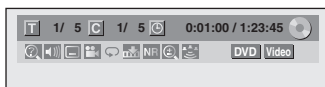
Repeat Playback

Available repeat function may vary depending the discs.

1) During playback, press **[DISPLAY]** or **[REPEAT]**.

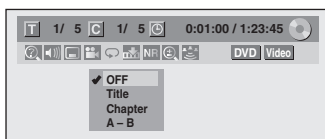
- If you press **[REPEAT]**, skip to step3.

2) Use **[◀/▶]** to select , then press **[ENTER]** within 1 second, or wait for 1 second to display the selection menu.

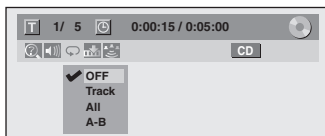


3) Use **[▲/▼]** to select a desired option to repeat, then press **[ENTER]**.

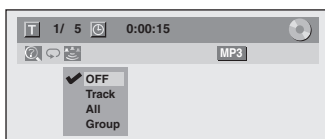
e.g.) DVD-video



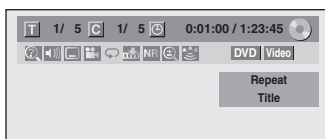
e.g.) audio CD



e.g.) MP3/JPEG files



The selected repeat playback will start.



Title:

The current title will be played back repeatedly.

Chapter:

The current chapter will be played back repeatedly.

All:

The current disc will be played back repeatedly.

A-B:

Desired section can be played back repeatedly.

1) Use **[▲/▼]** to select "A-B", then press **[ENTER]**.

2) Press **[ENTER]** at the desired starting point A.

3) Press **[ENTER]** at the desired ending point B.

Track:

The current track or file will be played back repeatedly.

Group:

The current folder will be played back repeatedly.

Note

- Point B for the repeat A-B playback should be set within the same title or track of point A.
- To cancel the repeat playback, select "OFF" at step 3. The repeat setting will also be canceled when you stop playback.
- You cannot select "Group" during the random playback of MP3/JPEG files.
- Chapter/Track repeat will be canceled whenever a Chapter/Track is skipped forward or backward.
- During the A-B repeat, if you reaches the point A with any reverse playback, the reverse playback will be canceled and the A-B repeat playback resumes from point A.

Random Playback



You can play back a disc randomly instead of playing back in the original order.

1) Press **[SETUP]** in stop mode.

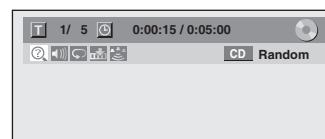
2) Use **[▲/▼]** to select "CD Playback Mode", then press **[ENTER]**.

"CD Playback Mode" menu will appear.


3) Use **[▲/▼]** to select "Random Play", then press **[ENTER]**.

Random playback will start.

e.g.) audio CD



Note

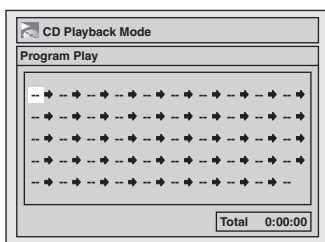
- To cancel random playback, press **[STOP ■]** twice during random playback. "OFF" appears on the display menu.
- During random playback, search function using  is not available.

Program Playback



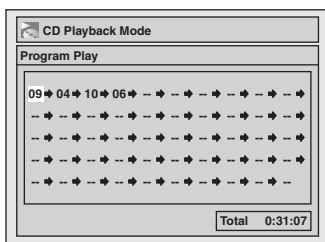
You can program the disc to play back in your desired order.

- 1) Press [SETUP] in stop mode.
- 2) Use [▲ / ▼] to select "CD Playback Mode", then press [ENTER].
"CD Playback Mode" menu will appear.
- 3) Use [▲ / ▼] to select "Program Play", then press [ENTER].
- 4) Use [▲ / ▼] to select a desired track, then press [ENTER] or [▶].



Repeat this step until you program all the desired tracks.

- 5) Press [PLAY ▶].



Program playback will start.

Note

- To erase tracks you selected, press [CLEAR] at step 4.
- You can make program settings up to 50 tracks.
- To cancel program playback, press [STOP ■] twice during program playback. "OFF" appears on the TV screen.
- You may also select a desired track using [the Number buttons] at step 4.
- During program playback, search function using [?] is not available.

Slide Show



You can select the display time between 5 seconds and 10 seconds.

- 1) Follow steps 1 and 2 in "Program Playback" on the left.
- 2) Use [▲ / ▼] to select "Slide Show", then press [ENTER].
- 3) Use [▲ / ▼] to select the display time, then press [ENTER].
- 4) Press [SETUP] to exit.

Note

- Large-size JPEG files take a few moments to be displayed.

SPECIAL SETTINGS

You can select the format of audio and video as you prefer depending on the contents of the disc you are playing back.

Switching Subtitles

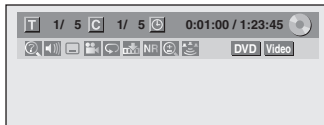


DVD-video may have subtitles in one or more languages. Available subtitle languages can be found on the disc case. You can switch subtitle languages during playback.

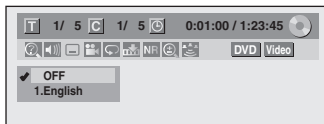
1) During playback, press **[DISPLAY]**.

2) Use **[◀/▶]** to select , then press **[ENTER]** within 1 second, or wait for 1 second to display the selection menu.

e.g.) DVD-video



3) Use **[▲/▼]** to select a desired subtitle language, then press **[ENTER]**.



Subtitle will be displayed in the selected language. When "OFF" is selected, subtitle will disappear.

Note

- Some discs will only allow you to change the subtitle from the disc menu. Press **[MENU/LIST]** or **[TOP MENU]** to display the disc menu.
- If a 4-digit language code appears in the subtitle menu, refer to the "LANGUAGE CODE" on page 110.

Switching Audio Soundtrack



When playing back a DVD-video recorded with 2 or more soundtracks (these are often in different languages), you can switch between them during playback.

When playing back the titles in HDD or VR mode DVD-RW discs recorded with bilingual audio, you can switch "L/R"(stereo), "L"(left) or "R"(right).

1) During playback, press **[DISPLAY]** or **[AUDIO]**.

If you press **[AUDIO]**, skip to step 3.

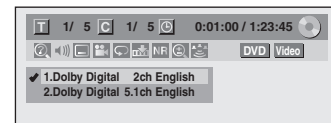
2) Use **[◀/▶]** to select , then press **[ENTER]** within 1 second, or wait for 1 second to display the selection menu.

3) Use **[▲/▼]** to select a desired audio soundtrack or audio channel, then press **[ENTER]**.

For HDD, DVD-video, VR mode DVD-RW

- Audio soundtrack will switch.

e.g.) DVD-video

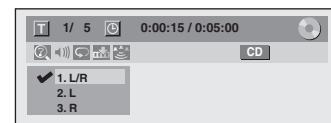


- If the title contains both main and sub audio, you can further select "L" (main), "R" (sub), "L/R" (mixed of main and sub).

For audio CD

- Audio channel will switch.

e.g.) audio CD



Note


- Some discs will only allow you to change the soundtrack from the disc menu. Press **[MENU/LIST]** or **[TOP MENU]** to display the disc menu.

Switching Virtual Surround System

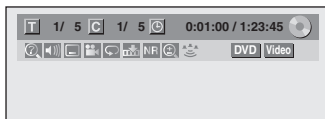


You can enjoy stereophonic virtual space through your existing 2 channel stereo system.

1) During playback, press [DISPLAY].

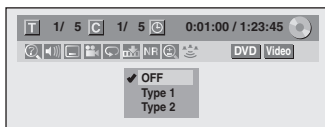
2) Use [◀/▶] to select , then press [ENTER] within 1 second, or wait for 1 second to display the selection menu.

e.g.) DVD-video



3) Use [▲/▼] to select "OFF", "Type 1" or "Type 2", then press [ENTER].

e.g.) DVD-video



OFF : no effect

Type 1 : natural effect

Type 2 : emphasized effect

Note

- Select "OFF" if sound is distorted.
- The setting will be kept when the unit is turned off.

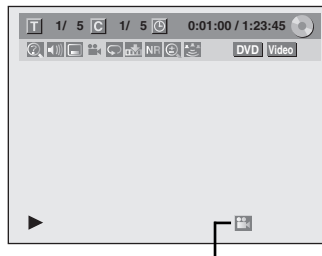
Switching Camera Angles



Some DVD-video have scenes shot from two or more angles. Angle information should be on the disc case if the disc contains multi-angle scenes.

1) During playback, press [DISPLAY].

2) Use [◀/▶] to select , then press [ENTER].



Angle icon appears when a switching camera angle is available.

Angle will switch each time you press [ENTER].

Note

- Angle icon does not appear on the TV screen if you set "Angle Icon" to "OFF" in "Playback" menu. Refer to page 98.

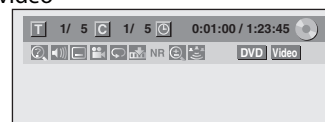
Reducing Block Noise



1) During playback, press [DISPLAY].

2) Use [◀/▶] to select **NR**, then press [ENTER] within 1 second, or wait for 1 second to display the selection menu.

e.g.) DVD-video



3) Use [▲/▼] to select a desired option, then press [ENTER].



Your setting will be activated.

This function reduces noise in the playback picture. If noises appear on the TV screen during playing back discs recorded in long time recording mode such as EP or SLP, select "Type 1" or "Type 2".

("Type 2" is more effective.)

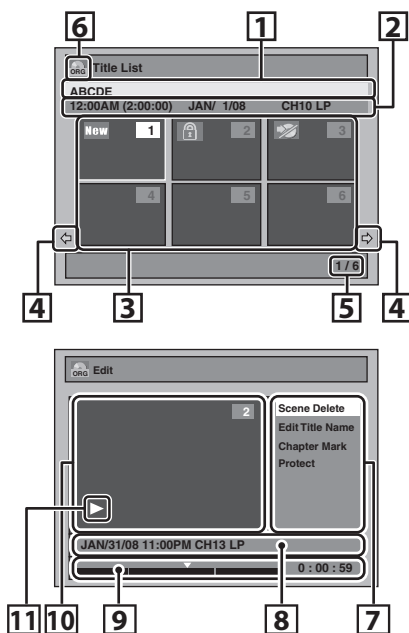
When playing back discs with a few noises such as DVD-video, select "OFF".

INFORMATION ON EDITING

Guide to a Title List

Title list allows you to check the titles recorded on the disc easily. You can choose a title to play back from this list and easily edit the titles as you prefer.

Press [HDD] or [DVD], then press [TOP MENU].



1. **Title name**
 2. **Title information:** Displays various information on the selected title.
 3. **Title list:** List of titles recorded on the HDD or disc. Each title is indicated by its index picture. Index picture for the selected title can be seen in motion. Following icons may be displayed on the index picture.
 - For the titles being blocked by the v-chip system (except the downloaded ratings), "BLOCK" will be displayed and you cannot watch the contents.
 - If the title contains any part that is copy-protected, the index picture will be black.
- * : Indicating the title has never been played back yet.
 : Indicating the title is protected.
 * : Indicating the title is a copy-protected title.
 * : Indicating the title is a copy-once program.
 * : If you call up the title list while recording, "●" will be displayed on the index picture of the title currently being recorded.
 * : Only available for HDD titles.
4. **Arrow:** Indicating there is a previous / next page.
 5. **Title list page number:** Current page / total pages.
 6. **Title list icon:** Indicating a type of the displayed title list.

: HDD (Original) mode	: HDD (Playlist) mode
: VR (Original) mode	: VR (Playlist) mode
: Video mode	
 7. **Submenu:** Submenus for the selected menu are displayed here.
 8. **Title name (editable):** If you do not name the title, the recorded date, time, channel and the recording mode are displayed here.
 9. **Progress bar:** Indicating the progress of the playback.
 10. **Preview window:** Preview of the selected title is displayed here.
 11. **Playback status:** Indicating the current playback status of the selected title.

Press [RETURN ↵] to exit the title list.

About Editing

You will find editing discs is easy. This unit offers convenient edit functions.

Available editing functions

- Assigning a name to a title
- Dividing a title
- Combining titles
- Adding titles to a playlist
- Erasing all playlist
- Setting or releasing the title protection
- Adding or deleting chapter marks
- Deleting titles or parts of titles

(Possible editing functions depend on the recording format and editing method.)

Original and playlist

For HDD and VR mode DVD-RW, you can edit the recordings in playlist without changing the original recordings. Playlist does not take up much disc space. After you make a recording to HDD and VR mode DVD-RW, a playlist will be created automatically.

What "Original" or "Playlist" is for?

Throughout this manual, you will find original and playlist which refer to the actual content and the edited version.

- **Original** content refers to what's actually recorded on the HDD and VR mode DVD-RW.
- **Playlist** content refers to the edited version of the HDD and VR mode DVD-RW; how the original content is to be played back.

Finalizing a disc

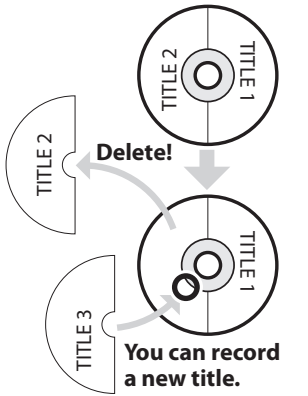
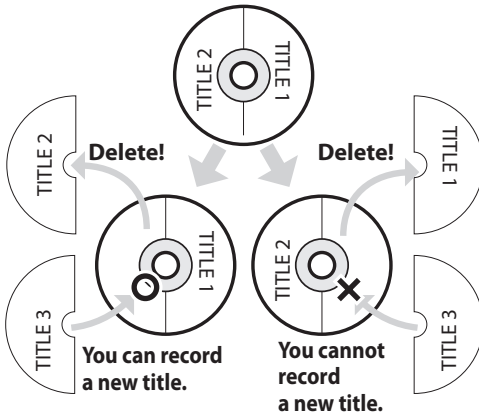
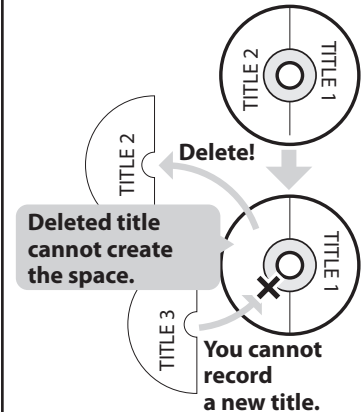
- This will allow a disc that is recorded on this unit to be played back on other DVD player — without finalization it will not be playable on other DVD player.
- After finalizing video mode DVD-RW/-R, you cannot edit any information that is on that disc.
- If you have recorded in VR mode DVD-RW, then editing is still permitted after finalizing.

Using these editing functions to modify copyrighted content for any purpose other than your private viewing may be prohibited under the Copyright Laws of the United States and other countries, and may subject you to civil and criminal liability.

DELETING TITLES

Notes for deleting titles

After the disc is fully recorded:

DVD-RW	DVD-R	
<ul style="list-style-type: none">When a title is deleted from DVD-RW in VR mode, the recordable disc space will be increased. <p>The Full-Recorded disc</p> 	<ul style="list-style-type: none">When the last title is deleted from DVD-RW in video mode, the recordable space will be increased. <p>The Full-Recorded disc</p> 	<ul style="list-style-type: none">When a title is deleted from DVD-R, the recordable space will NOT be increased. <p>The Full-Recorded disc</p> 

Once all editings are made, press **[RETURN ↵]** in several times to exit the editing mode. "Writing to Disc" appears momentarily. It also appears when pressing **[▲OPEN/CLOSE]** or **[POWER]** before exiting the editing mode after editing.

Introduction

Connections

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Function Setup

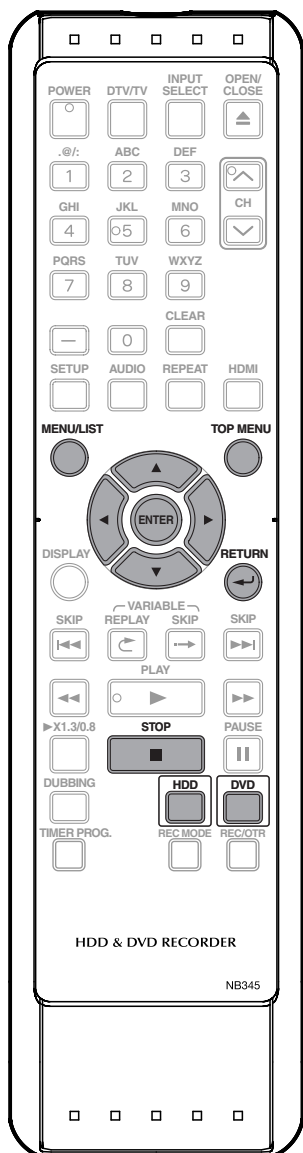
Others

Español

DELETING TITLES



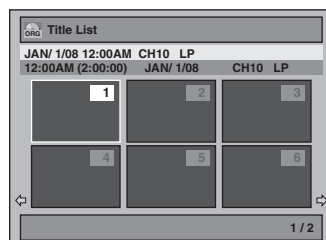
You can delete titles which you do not need anymore.
Please be advised that the titles once deleted cannot be brought back to the disc.
Be sure to read "Notes for deleting titles" on page 77 before you delete the title.



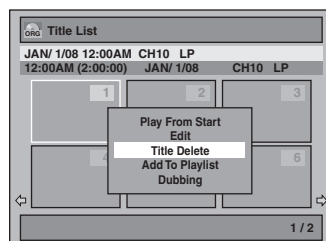
If you edit the HDD, press **[HDD]** first.
If you edit a disc, press **[DVD]** first.

1 In stop mode, press [TOP MENU].
Title list, original or playlist will appear.
• For HDD and VR mode DVD-RW, press **[MENU/LIST]** to switch between "Original" and "Playlist".

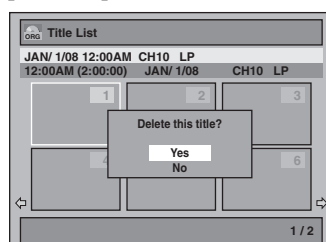
2 Use [▲ / ▼ / ◀ / ▶] to select a desired title, then press [ENTER].
e.g.) VR mode DVD-RW original



3 Use [▲ / ▼] to select "Title Delete", then press [ENTER].



4 Use [▲ / ▼] to select "Yes", then press [ENTER].



After that, "Are you sure?" will appear, select "Yes" and then press **[ENTER]**.
Title will be deleted.

5 Press [RETURN ↵] or [STOP ■] to exit.
Data will be written onto the disc momentarily.



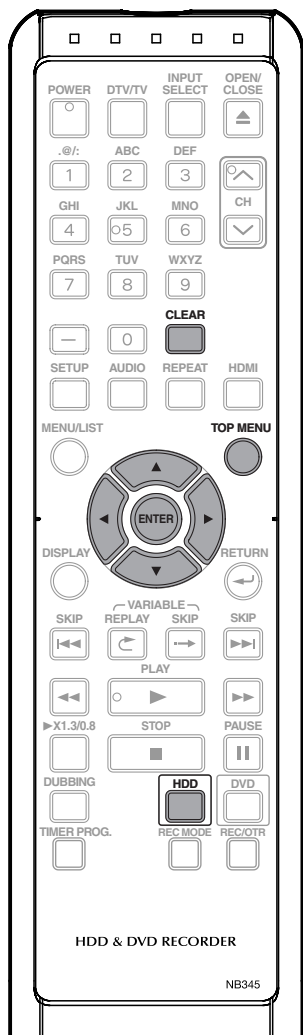
This operation may take awhile to be completed.

DELETING TITLES

Deleting Selected Titles

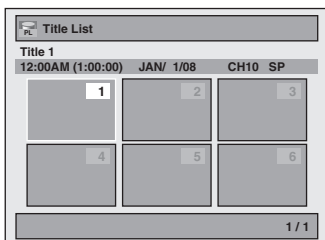


You can delete titles which you do not need anymore. Please be advised that the titles once deleted cannot be brought back.

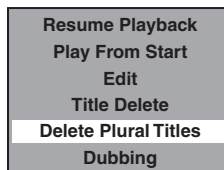


1 Press [HDD], then press [TOP MENU].

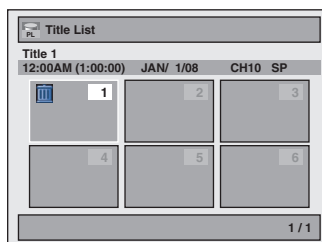
2 Use [▲ / ▼ / ◀ / ▶] to select any title, then press [ENTER].
e.g.) HDD Playlist



3 Use [▲ / ▼] to select "Delete Plural Titles", then press [ENTER].

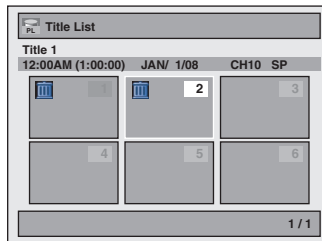


4 Use [▲ / ▼ / ◀ / ▶] to select the title you want to delete, then press [ENTER].



Trash mark will appear indicating the title is marked for deletion.

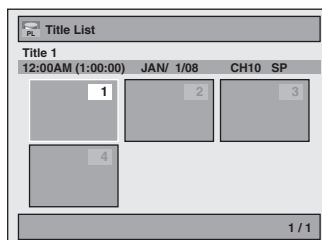
5 Repeat step 4 until you select all the titles you want to delete.



To remove the trash mark from the title:
Select the title with the trash mark, then press [ENTER].

6 Press [CLEAR].
Confirmation message will appear.

7 Use [▲ / ▼] to select "Yes", then press [ENTER].



Final confirmation message will appear. Select "Yes", then press [ENTER].
Titles are now deleted.

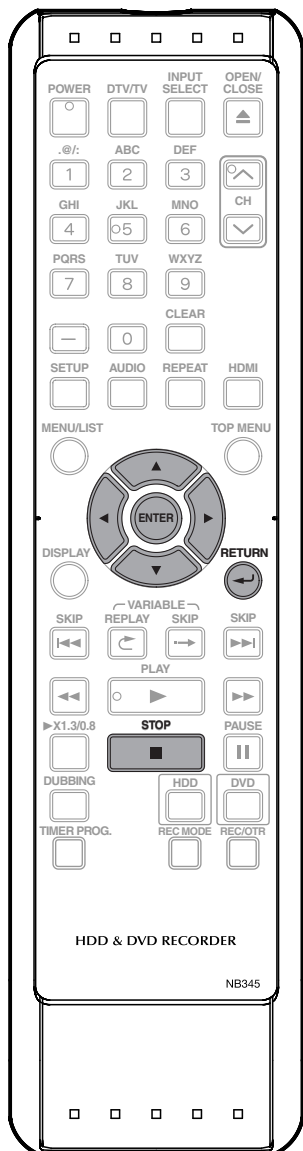
CREATING/DELETING PLAYLIST

Adding Titles to a Playlist



For HDD and VR mode DVD-RW, you can create the playlist as you wish.

You can add up to 600(HDD) or 99(VR mode DVD-RW) titles to a playlist.



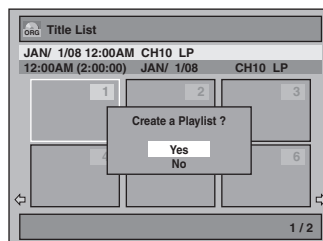
1 Follow the step 1 in “DELETING TITLES” on page 78 to display the original.

2 Use [▲ / ▼ / ◀ / ▶] to select the desired title, then press [ENTER].

3 Use [▲ / ▼] to select “Add To Playlist”, then press [ENTER].
e.g.) VR mode DVD-RW original



4 Use [▲ / ▼] to select “Yes”, then press [ENTER].



The title is added to playlist.

5 Press [RETURN ◀] or [STOP ■] to exit.

Data will be written onto the disc momentarily.

This operation may take awhile to be completed.

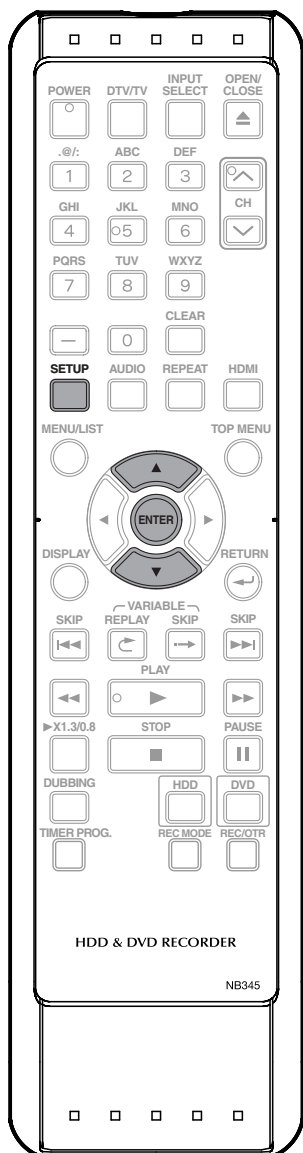
Note

- To delete a title from the playlist, refer to “DELETING TITLES” on pages 77-79.
- To delete all titles in the playlist, refer to “Erasing All Playlist” on page 81.
- For VR mode DVD-RW, when a playlist contains 99 titles or 999 chapters, “Add to Playlist” cannot be selected.
- For HDD, when a playlist contains 600 titles, “Add to Playlist” cannot be selected.

Erasing All Playlist



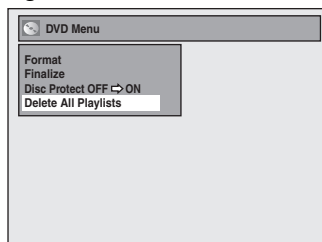
A playlist can be deleted if it is no longer needed.



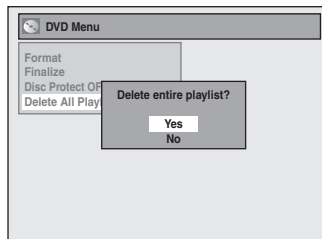
1 Press [SETUP].
Main menu will appear.

2 Use [▲ / ▼] to select “DVD Menu” (for DVD) or “HDD Menu” (for HDD), then press [ENTER].

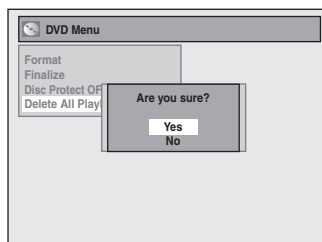
3 Use [▲ / ▼] to select “Delete All Playlist”, then press [ENTER].
e.g.) DVD



4 Use [▲ / ▼] to select “Yes”, then press [ENTER].



“Are you sure?” will appear.
Use [▲ / ▼] to select “Yes” and then press [ENTER].



Playlist is deleted.
For DVD, data will be written onto the disc momentarily.

This operation may take awhile to be completed.

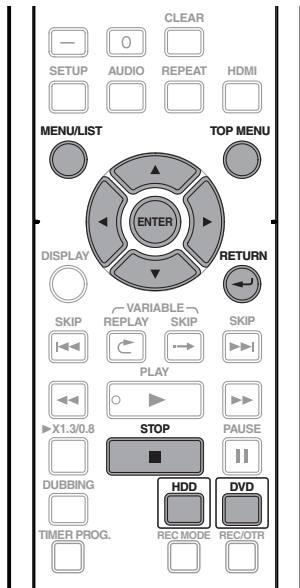
Note

- Deleting a playlist will not increase the available recording time on the disc.

Putting Names on Titles



You can put a name on the disc and change it from this menu.



If you edit the HDD, press [HDD] first.

If you edit a disc, press [DVD] first.

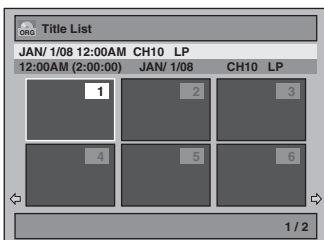
1 In stop mode, press [TOP MENU].

Title list, original or playlist will appear.

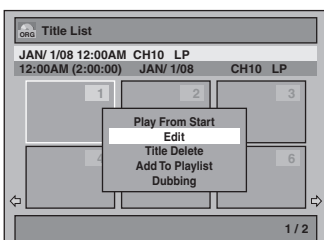
- For HDD and VR mode DVD-RW, press [MENU/LIST] to switch between "Original" and "Playlist".

2 Use [▲ / ▼ / ◀ / ▶] to select a desired title, then press [ENTER].

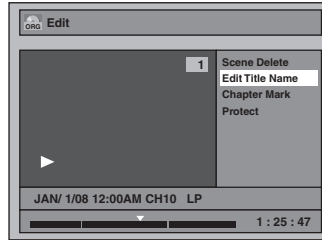
e.g.) VR mode DVD-RW original



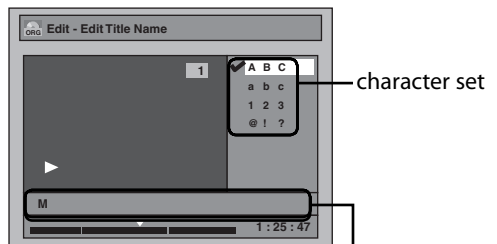
3 Use [▲ / ▼] to select "Edit", then press [ENTER].



4 Use [▲ / ▼] to select "Edit Title Name", then press [ENTER].



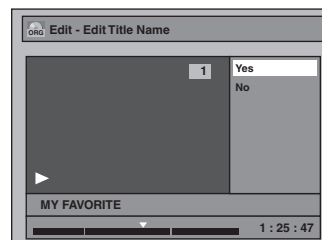
5 To enter a title name, follow the steps of "Guide to Edit Title Name" on page 83.



area for entering title names

When you finish entering a title name, press [ENTER].

6 Use [▲ / ▼] to select "Yes", then press [ENTER].



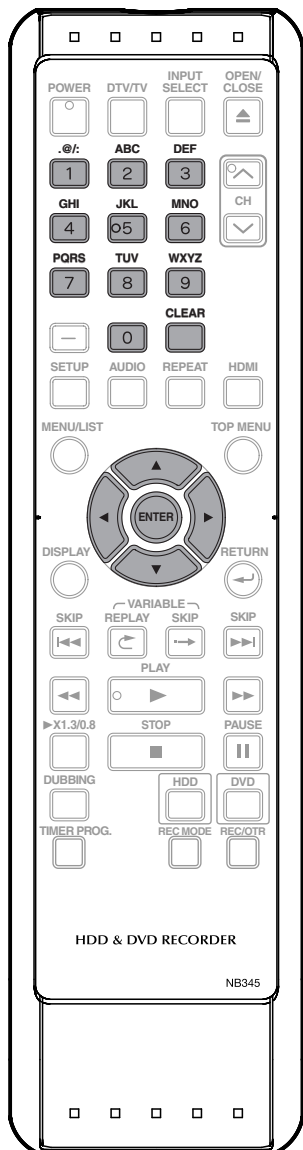
The name you entered will be activated for the title.

7 Press [RETURN ↵] and then [RETURN ↵] or [STOP ■] to exit.

For DVD, data will be written onto the disc momentarily.

This operation may take awhile to be completed.

Putting Names on Titles (cont'd)



Guide to Edit Title Name

- 1) Use [▲ / ▼] to select a desired character set, then press [ENTER].
- 2) Follow the list below, use [the Number buttons] repeatedly until the desired letter appears.

Select Press ✓	ABC	abc	123	@!?
[0]	<space>	<space>	0	<space>
[1]	(*1)	(*1)	1	! " # \$ % & ' () * + , - . / : ; < = > ? @ [^ _ { }
[2]	ABC	abc	2	(*2)
[3]	DEF	def	3	(*2)
[4]	GHI	ghi	4	(*2)
[5]	JKL	jkl	5	(*2)
[6]	MNO	mno	6	(*2)
[7]	PQRS	pqrs	7	(*2)
[8]	TUV	tuv	8	(*2)
[9]	WXYZ	wxyz	9	(*2)

- *1 Press [1], character set will be changed to the "@!?" mode automatically.
- *2 Press [2] to [9], character set will be changed to the previous input mode automatically.
 - To delete letters, press [CLEAR] repeatedly. Press and hold [CLEAR] to delete all letters.
 - Use [◀ / ▶] to move the cursor to the left and right.
 - You can enter up to 30 letters.

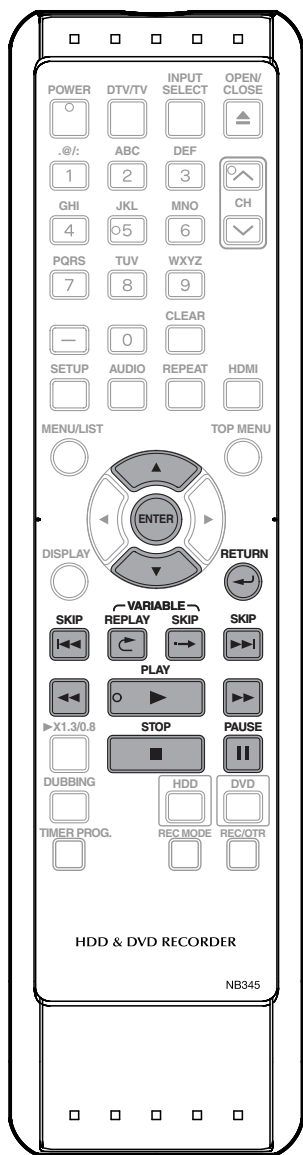
Note

- Undefined letters in a title name are shown by "×". If you delete them, adjoining letters may change to "×" or other.

Adding or Deleting Chapter Markers Manually



You can put chapter marks in each title. Once a chapter is marked, you can use it for the chapter search feature.

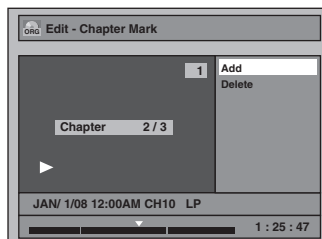


1 Follow steps 1 to 3 in “Putting Names on Titles” on page 82 to display “Edit” menu.

2 Use [▲ / ▼] to select “Chapter Mark”, then press [ENTER].
Submenu will appear.

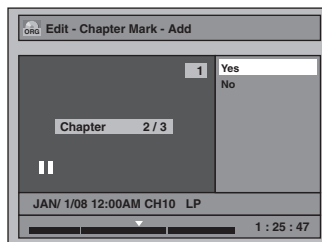
3 Use [SKIP ◀◀ / ▶▶], [REV ◀◀], [FWD ▶▶], [VARIABLE SKIP →], [VARIABLE REPLAY ◀], [PLAY ▶] and [PAUSE ||] to find the point where you will create a new chapter mark. Or, use [SKIP ◀◀ / ▶▶] to find a chapter mark that you wish to delete.

4 Use [▲ / ▼] to select “Add” or “Delete”, then press [ENTER].
e.g.) VR mode DVD-RW original



5 Use [▲ / ▼] to select “Yes”, then press [ENTER].

If you select “Add” at step 4, a new chapter mark will be added, and if you select “Delete” at step 4, the chapter mark will be deleted.
e.g.) Add



A new chapter mark will be added.

6 Press [RETURN ↵].

7 Press [RETURN ↵] again and then [RETURN ↵] or [STOP ■] to exit.
For DVD, data will be written onto the disc momentarily.

This operation may take awhile to be completed.

Note

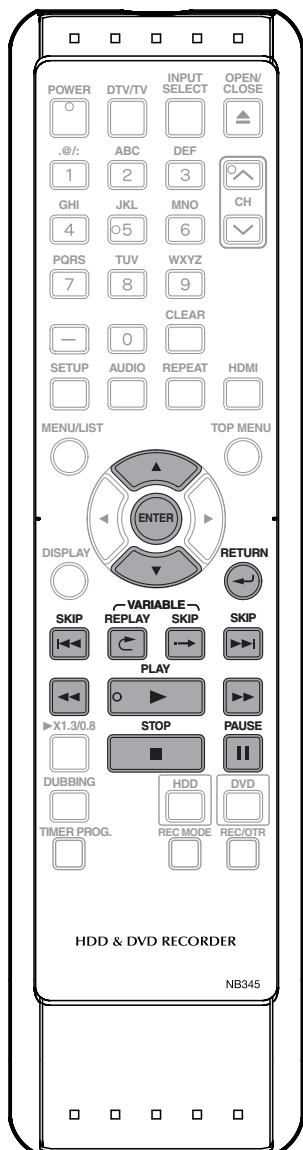
- Maximum numbers of chapter for each media:
HDD : 99 chapters per title
VR mode DVD : 999 chapters per entire original and playlist
- Besides the above-mentioned, for DVD, it is not likely to be able to add according to recorded time and number of chapters.

Deleting a Part of a Title



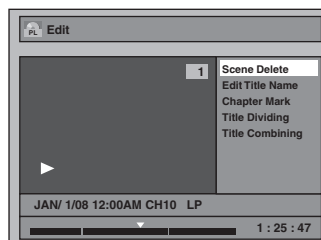
You can delete a specific part of a title.

Even when parts of title are deleted from the playlist, the original title will remain as it is.



1 Follow the steps 1 to 3 in “Putting Names on Titles” on page 82 to display “Edit” menu.

2 Use [▲ / ▼] to select “Scene Delete”, then press [ENTER].
e.g.) VR mode DVD-RW playlist.



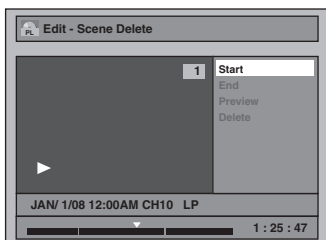
Note

- When a scene is deleted from an original, the playlist related to the original will be deleted.
- For VR mode DVD-RW, you cannot select “Scene Delete” if the number of chapter marks in the original or playlist is 999. (Depends on the content, there is a case that you cannot select “Scene Delete” before the number of chapter marks reaches 999.)
- The recordable disc space will not increase even after deleting a part of a title on the playlist.

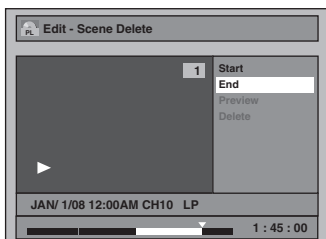
Instructions continue on the next page.

Deleting a Part of a Title (cont'd)

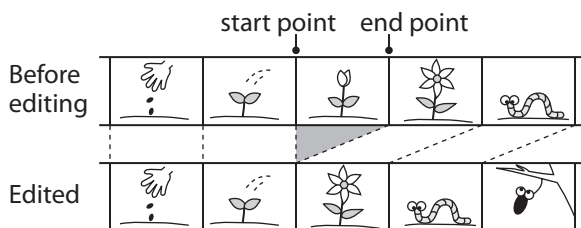
3 Use [SKIP ◀◀ / ▶▶], [REV ◀◀], [FWD ▶▶], [VARIABLE SKIP →], [VARIABLE REPLAY ⇐], [PLAY ▶] and [PAUSE ||] to find the start point, then press [ENTER].



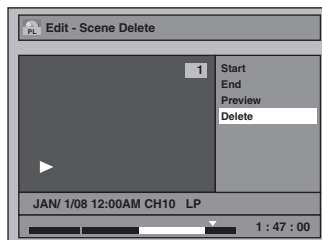
Then use [SKIP ◀◀ / ▶▶], [REV ◀◀], [FWD ▶▶], [VARIABLE SKIP →], [VARIABLE REPLAY ⇐], [PLAY ▶] and [PAUSE ||] again to move to the end point, and press [ENTER].



The cursor will move to "Preview".
The bar at the bottom of the screen indicates the total and the elapsed time of the title, and the area selected for deletion is indicated in red.
You can check the preview by pressing [ENTER].
• Before and after 5 seconds of the deleted point will be playback for preview.

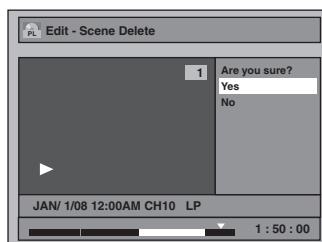


4 Use [▲ / ▼] to select "Delete" then press [ENTER].



5 Use [▲ / ▼] to select "Yes" then press [ENTER].

"Are you sure?" will appear. Select "Yes" using [▲ / ▼] and then press [ENTER].



The part of the title is deleted.

6 Press [RETURN ↵] and then [RETURN ↵] or [STOP ■] to exit.

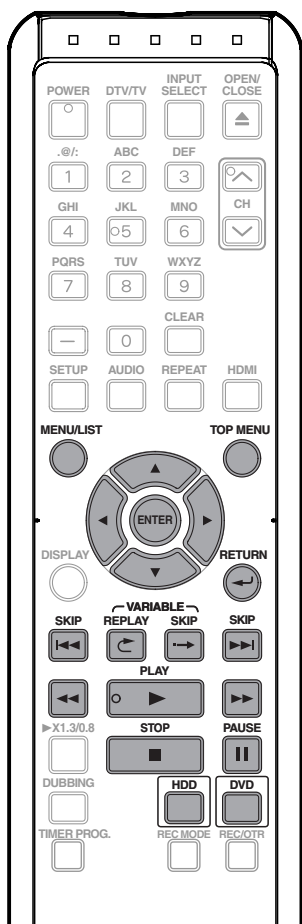
For DVD, data will be written onto the disc momentarily.

This operation may take awhile to be completed.

Dividing a Title



You can divide one title into two new titles.



If you edit the HDD, press **[HDD]** first.
If you edit a disc, press **[DVD]** first.

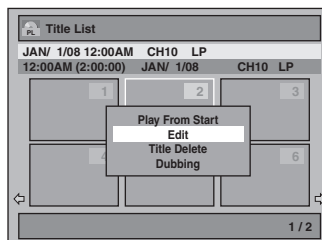
1 In stop mode, press **[TOP MENU]**.
• For VR mode DVD-RW, press **[MENU/LIST]** to select "Playlist".

2 Use **[▲ / ▼ / ◀ / ▶]** to select a desired title, then press **[ENTER]**.

Note

- You cannot divide a title of the disc when the number of recording titles reaches the maximum of 600 (HDD), 99 (-RW), and the number of recording chapters reaches the maximum of 999 (-RW).
- If there is not enough recordable space is left in HDD, you can not divide a title of the HDD original.

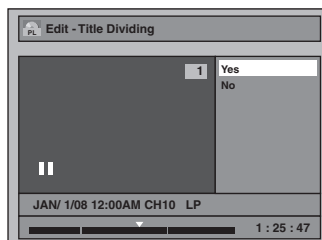
3 Use **[▲ / ▼]** to select "Edit", then press **[ENTER]**.
e.g.) VR mode DVD-RW playlist



4 Use **[SKIP ◀◀]**, **[SKIP ▶▶]**, **[REV ◀◀]**, **[FWD ▶▶]**, **[PAUSE ||]**, **[VARIABLE SKIP →]**, **[VARIABLE REPLAY ◀]** and **[PLAY ▶]** to decide the point at which you will divide the title.

5 Use **[▲ / ▼]** to select "Title Dividing", then press **[ENTER]**.

6 Use **[▲ / ▼]** to select "Yes", then press **[ENTER]**.



The title will be divided into two new titles.
Both title names are identical.

7 Press **[RETURN ↵]** or **[STOP ■]** to exit.

For DVD, data will be written onto the disc momentarily.

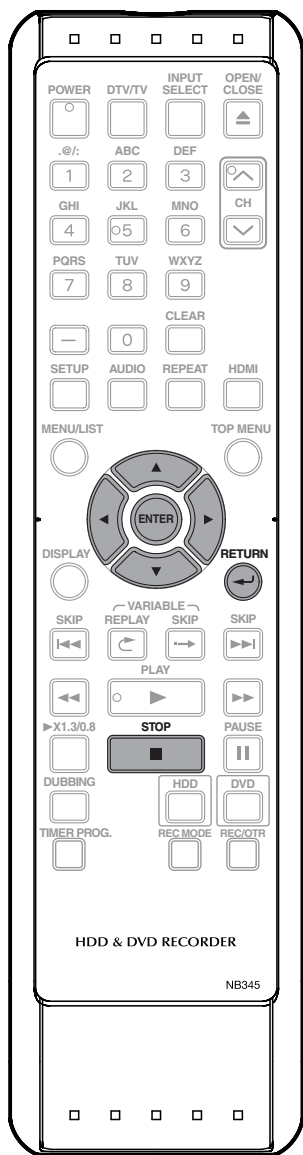


This operation may take awhile to be completed.

Combining Titles



You can combine two titles into a single title.

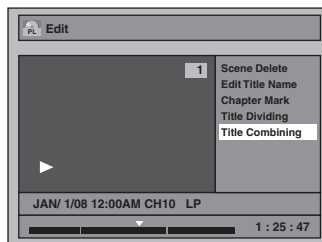


1 Follow the steps 1 to 3 in “Dividing a Title” on page 87 to display “Edit” menu.

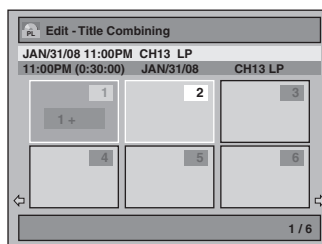
Note

- You cannot select the same title twice and combine it into a single title.
- If either one of the two original titles is deleted, the combined new title is also deleted.

2 Use [▲ / ▼] to select “Title Combining”, then press [ENTER].
e.g.) VR mode DVD-RW playlist

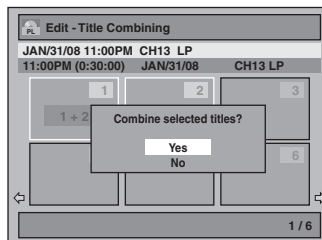


Title combining setting window will appear. Selected title grays out, and the frame of the next title becomes yellow.

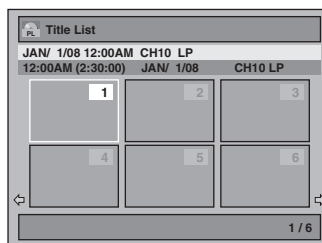


3 Use [▲ / ▼ / ◀ / ▶] to select another title to combine, then press [ENTER].
Selection menu will appear.

4 Use [▲ / ▼] to select “Yes”, then press [ENTER].



The two titles will combine into a single title.



5 Press [RETURN ↵] or [STOP ■] to exit.

For DVD, data will be written onto the disc momentarily.

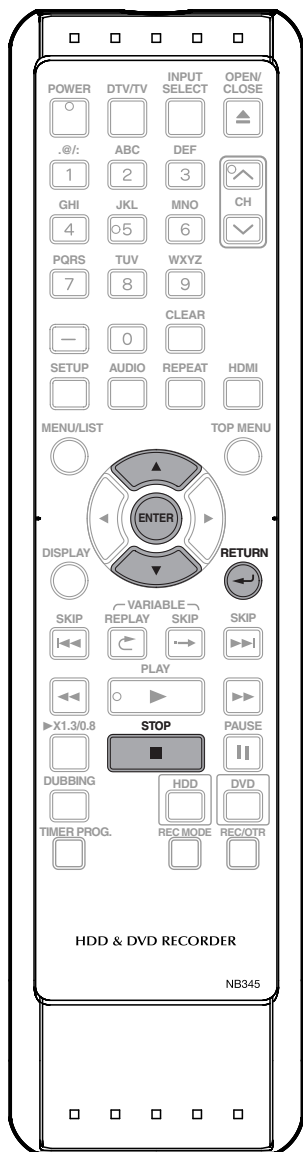
This operation may take awhile to be completed.

Setting or Releasing the Title Protection



To prevent the accidental editing, or erasing of the titles, you can protect them in "Edit" menu.

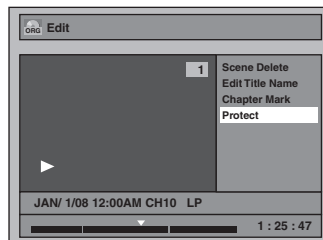
You can cancel the title protection feature after it is applied.



1 Follow the steps 1 to 3 in "Putting Names on Titles" on page 82 to display "Edit" menu.

2 Use [▲ / ▼] to select "Protect", then press [ENTER].

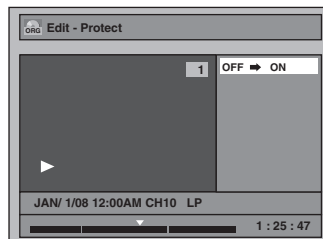
e.g.) VR mode DVD-RW original



- If the title is protected, will appear in the original list.

3 Confirm the indication "OFF ➡ ON". Press [ENTER] again.

- If the title is already protected, "ON ➡ OFF" will appear. If you press [ENTER], the title will be released from protection.



- will appear on the title in the original list.

4 Press [RETURN ↵] and then [RETURN ↵] or [STOP ■] to exit.

For DVD, data will be written onto the disc momentarily.

This operation may take awhile to be completed.

To protect a whole disc (VR mode DVD-RW only):

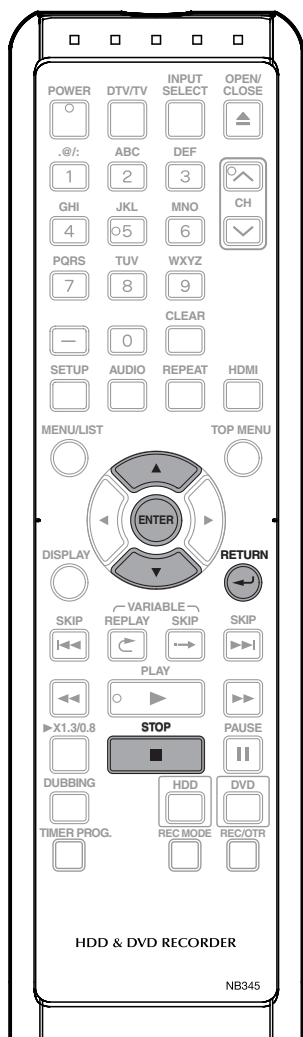
Select "Disc Protect OFF ➡ ON" from the DVD Menu, then select "Yes".

Refer to "SETTING A DISC TO PROTECT" on page 41.

Setting or Clearing All Chapter Marks at Once

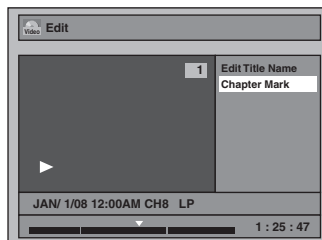


For titles in video mode DVD, you can set or edit chapter at every time interval. You can clear the chapter mark too. You can specify the interval of chapter marks for titles last more than 5 minutes.

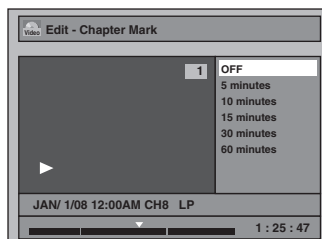


1 Follow the steps 1 to 3 in “Putting Names on Titles” on page 82 to display “Edit” menu.

2 Use [▲ / ▼] to select “Chapter Mark”, then press [ENTER].



3 Use [▲ / ▼] to select the desired interval, then press [ENTER].



4 Use [▲ / ▼] to select “Yes”, then press [ENTER].

Chapter marks are added.

If you select “OFF” at step 3, all the chapter marks are erased.

5 Press [RETURN ↵] and then [RETURN ↵] or [STOP ■] to exit.

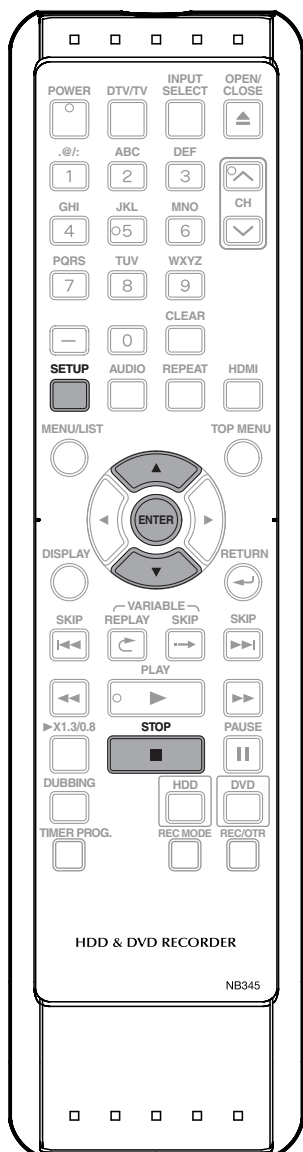
Data will be written onto the disc momentarily.

This operation may take awhile to be completed.

Note

- You cannot select a chapter mark interval that exceeds the length of a title.
- The length of chapters may slightly deviate from the one specified at the step 3.
- A chapter mark may be delayed depending on the recording content.
- Maximum number of chapter for video mode DVD is 99 chapters per title.
- The interval for auto chapter may be up to two minutes different from the time option you set.
- You cannot add any chapters to the titles dubbed from HDD to video mode DVD-RW by the high speed dubbing.

Deleting All Titles in HDD

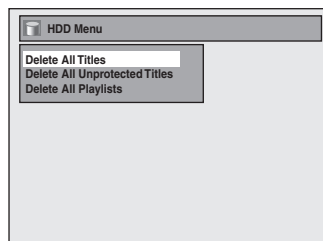


Press **[STOP ■]** if you are playing back an HDD or a disc.

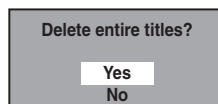
1 Press **[SETUP]**.

2 Use **[▲ / ▼]** to select “HDD Menu”, then press **[ENTER]**.

3 Use **[▲ / ▼]** to select the desired type of deletion, then press **[ENTER]**.
 Select “Delete All Titles” if you want to delete all titles including the ones protected.
 Select “Delete All Unprotected Titles” if you want to delete only the unprotected titles.
 Select “Delete All Playlists” if you want to delete all Playlists.



4 Use **[▲ / ▼]** to select “Yes”, then press **[ENTER]**.



Final confirmation message will appear. Select “Yes”, then press **[ENTER]**.
 Titles are now deleted.

LIST OF THE DEFAULT SETTINGS

The following table is the contents which you can set and the default settings.
Refer to the following table for useful operation.

Setup	Items (highlight is the default)		Contents			
General Setting	Playback	Parental Lock → page 96	OFF level 8 [Adult] to 1 [Kid Safe]	Set the parental level for DVD playback.		
	Audio Out → page 97	Dynamic Range Control	ON OFF	Compressing the range of sound volume.		
		PCM	48kHz 96kHz	Set whether the sound recorded in 96kHz will be down sampled in 48kHz.		
		Dolby Digital	PCM Stream	Set the type of sound signal which outputs from the digital audio output jack.		
	Disc Menu Language → page 97		English French Spanish Other	Set the language for disc menu language.		
	Audio Language → page 97		Original English French Spanish Other	Set the language for audio.		
	Subtitle Language → page 98		OFF English French Spanish Other	Set the language for subtitles.		
	Angle Icon → page 98		ON OFF	Set whether to display the angle icon or not.		
	Still Mode → page 98		Auto Field Frame	Set the type of still image in pausing playback.		
	Variable Skip / Replay → page 98		Variable Skip 5 seconds 15 seconds 30 seconds 1 minute 5 minutes	Set the amount of skip time when you press [VARIABLE SKIP →].		
			Variable Replay 5 seconds 15 seconds 30 seconds 1 minute 5 minutes	Set the amount of rewind time when you press [VARIABLE REPLAY ⏮].		
	Display	OSD Language → page 99		English Français Español	Set the language for OSD (on-screen display).	
		Screen Saver → page 99		OFF 5minutes 10minutes 15minutes 30minutes	Set the idling time before the screen saver starts.	
		FL Dimmer → page 99		Auto Bright Dark	Set the brightness of the front panel display.	
		DTV CC	Caption Service → page 36		OFF Service1 Service2 Service3 Service4 Service5 Service6	Set the type of the DTV closed caption.
			Recording → page 45		ON OFF	Set whether to record the DTV closed caption or not.

LIST OF THE DEFAULT SETTINGS

Setup		Items (highlight is the default)		Contents	
General Setting	Display	CC Style	User Setting → page 37	ON OFF	Set the CC style setting whether or not is effective.
			Font Size → page 38	Large Middle Small	Set font size of the displayed caption.
			Font Style → page 38	Style1 Style2 Style3 Style4 Style5 Style6 Style7 Style8	Set font style of the displayed caption.
			Font Opacity → page 38	Solid Transparent Translucent Flash	Set the font opacity of the displayed caption.
			Font Color → page 38	White Black Red Green Blue Yellow Magenta Cyan	Set the font color of the displayed caption.
			Edge Type → page 38	None Raised Depressed Uniform L.Shadow R.Shadow	Set edge type of the displayed caption.
			Edge Color → page 38	White Black Red Green Blue Yellow Magenta Cyan	Set edge color of the displayed caption.
			Back Opacity → page 38	Solid Transparent Translucent Flash	Set back opacity of the displayed caption.
			Back Color → page 38	White Black Red Green Blue Yellow Magenta Cyan	Set back color of the displayed caption.
	V-Chip	MPAA Rating → page 100	X NC-17 R PG-13 PG G NR	Set the viewing limitation according to US movie ratings.	
		TV Rating → page 100	TV-MA TV-14 TV-PG TV-G TV-Y7 TV-Y NR	Set the viewing limitation according to US TV program ratings.	
		Canadian French Rating → page 100	18 ans+ 16 ans+ 13 ans+ 8 ans+ G E	Set the viewing limitation according to Canadian French language Ratings.	

Introduction

Connections

Basic Setup

Disc Management

Recording

Playback

Editing

Function Setup

Others

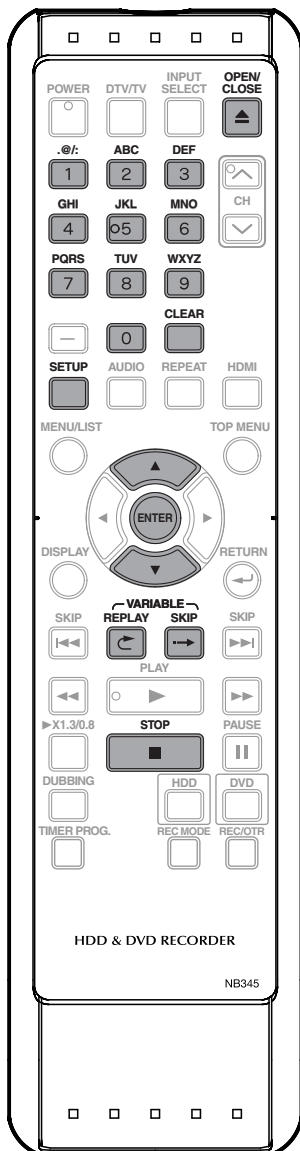
Español

LIST OF THE DEFAULT SETTINGS

Setup	Items (highlight is the default)			Contents	
General Setting	Display	V-Chip	Canadian English Rating → page 101	18+ 14+ PG G C8+ C E	Set the viewing limitation according to Canadian English language Ratings.
			Downloadable Rating → page 101	BLOCK SETTING CLEAR DOWNLOADABLE RATING	To set the rating. Clear the downloadable rating information and its setting.
			Change Password → page 101		Change the password.
	Video	Progressive → page 102		ON OFF	Set to the progressive scan mode (set to "ON") or to the interlace scan mode (set to "OFF").
		TV Aspect → page 102		4:3 Letter Box 4:3 Pan & Scan 16:9 Wide	Set a picture size according to aspect ratio of your TV.
		Select Video → page 53	L1(Rear)	Video In S-Video In	Set the video input type for the external input.
			L2(Front)	Video In S-Video In	
	Recording	Auto Chapter → page 45		OFF 5 minutes 10 minutes 15 minutes 30 minutes 60 minutes	Insert chapter marks at even time interval.
		Auto Finalize → page 42	Disc Full	ON OFF	Set the unit to finalize the disc automatically.
			End of Timer Rec	ON OFF	
	Clock	Clock Setting → page 32			Set the clock.
		Auto Clock Setting → page 31		OFF Auto Manual	Set the clock automatically.
		Daylight Saving Time → page 32		ON(MAR-NOV) ON(APR-OCT) OFF	Set the clock for the daylight saving time.
	Channel	Auto Preset → page 28		Air Cable Cable (Extended Scan)	Tune the channels automatically.
		Manual Preset → pages 29-30			Tune the channels manually.
		TV Audio Select → page 35		Stereo SAP	Set the analog TV audio type for output and video mode.
	HDMI	Format → page 103		RGB YCbCr	Set the color space for the HDMI output.
		HDMI Audio → page 103		ON OFF	Set whether to output the HDMI audio signal or not.
		RGB Range → page 103		Normal Enhanced	Set the black-white contrast level for HDMI RGB output.
	Reset All → page 104			Yes No	Set to the default setting.

Note

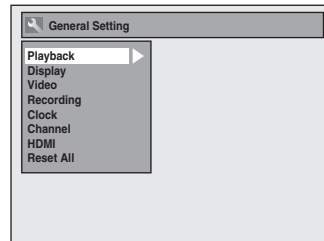
- Your change to each settings stays on even when the power is off.
- An item which is not currently available is grayed in the settings.



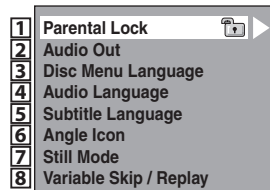
Press [STOP ■] if you are playing back an HDD or a disc.

1 Press [SETUP] and use [▲ / ▼] to select "General Setting", then press [ENTER].

2 Use [▲ / ▼] to select "Playback", then press [ENTER].



3 Use [▲ / ▼] to select a desired item, then press [ENTER].



Submenu will appear.

4 Refer [1] to [8] on pages 96 to 98 and set the selected item.

5 When you finish with the setting, press [SETUP] to exit.

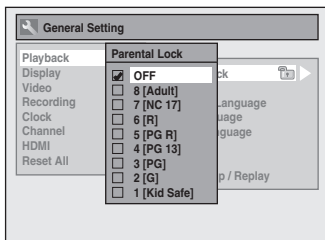
GENERAL SETTING

Playback (cont'd)

1 Parental Lock (Default: OFF)

Some DVD-video feature a parental lock level. Playback will stop if the ratings exceed the levels you set, it will require you to enter a password before the disc will playback. This feature prevents your children from viewing inappropriate material.

Use **[▲ / ▼]** to select the desired level, then press **[ENTER]**.



If a password has not been set yet, proceed to **A**.
If a password has been set already, proceed to **B**.

RATING EXPLANATIONS

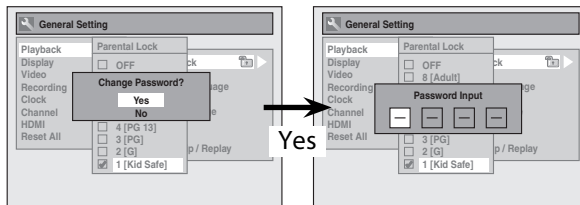
- OFF : Parental Control is inactive; all discs can play.
- 8 [Adult]: DVD software of any grades (adult/general/ children) can be played back.
- 7 [NC 17]: No one under 17 admitted.
- 6 [R]: Restricted; under 17 requires accompanying parent or adult guardian.
- 5 [PG R]: Parental Guidance Recommended.
- 4 [PG 13]: Unsuitable for children under 13.
- 3 [PG]: Parental Guidance suggested.
- 2 [G]: General Audience.
- 1 [Kid Safe]: Suitable for children.

Note

- Parental lock function may not be available to some discs.
- With some DVD, it may be difficult to find if they are compatible with parental lock. Be sure to check if the parental lock function operates in the way that you have set.
- Record the password in case you forget it.
- If there is a DVD in the unit when you set up the parental lock, press **[OPEN/CLOSE ▲]** to activate the parental lock level.

A A password has not been set yet.

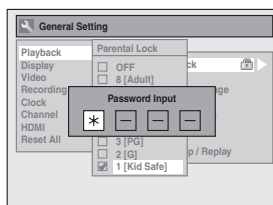
Use **[▲ / ▼]** to select “Yes”, then press **[ENTER]**. Use **[the Number buttons]** to enter a new password except for 4737, then press **[ENTER]**.



Your setting will be activated.

B A password has been set already.

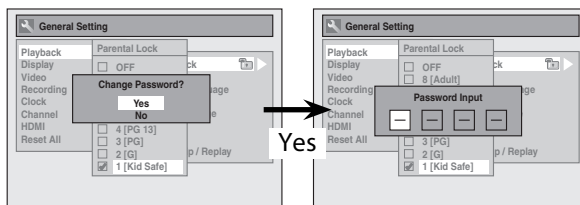
• Use **[the Number buttons]** to enter the current password.



Your setting will be activated.

• If you want to change password, use **[▲ / ▼]** to select “Yes” then press **[ENTER]**. Use **[the Number buttons]** to enter a new password, then press **[ENTER]**.

<change the password>



Your setting will be activated.

Note

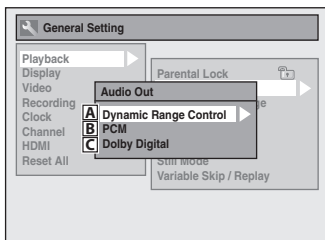
- Press **[CLEAR]** to erase numbers entered incorrectly.
- When you forget the password or you want to clear all settings in “Parental Lock” menu, enter 4,7,3,7 using **[the Number buttons]** in password input window. Password will be cleared and parental levels will be set to “OFF”.

Playback (cont'd)

2 Audio Out

Choose the appropriate audio setting for your external device.
It will only affect a disc playback.

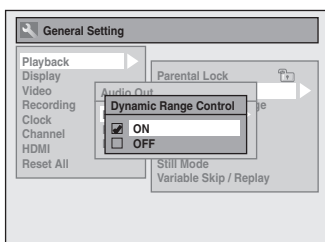
Use [▲ / ▼] to select a desired item, then press [ENTER].



A Dynamic Range Control (Default : ON)

Set to "ON" to compress the range between soft and loud sounds.

Use [▲ / ▼] to select a setting, then press [ENTER].



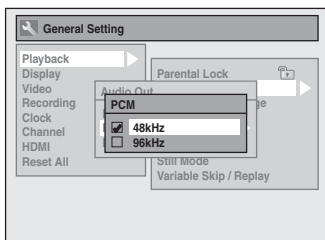
Your setting will be activated.

Note

- Dynamic range control function is available only on the discs which are recorded in the Dolby Digital format.

B Settings for PCM (Default : 48kHz)

Use [▲ / ▼] to select a setting, then press [ENTER].



Your setting will be activated.

48kHz : If your amplifier/decoder is NOT compatible with 96kHz PCM, select "48kHz". 96kHz sound will be output in 48kHz.

96kHz : If your amplifier/decoder is compatible with 96kHz PCM, select "96kHz". 96kHz sound will be output.

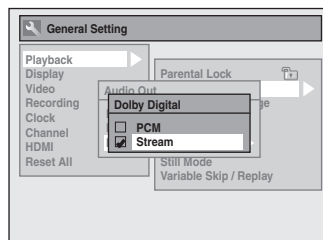
Note

When playing back disc with copyright protection

- Even if you select "96kHz", the sound will be down sampled at 48kHz.

C Settings for Dolby Digital (Default : Stream)

Use [▲ / ▼] to select a setting, then press [ENTER].



Your setting will be activated.

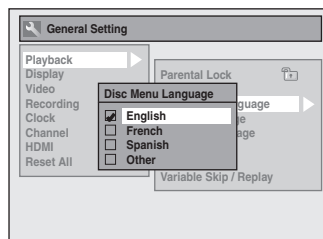
PCM : Converts the Dolby Digital into PCM (2 channel).
When your amplifier/decoder is NOT compatible with Dolby Digital, set to "PCM".

Stream : Outputs Dolby Digital signals.
When your amplifier/decoder is compatible with Dolby Digital, set to "Stream".

3 Disc Menu Language (Default : English)

Set the language for disc menu.

Use [▲ / ▼] to select a language, then press [ENTER].

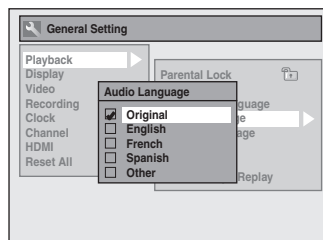


Your setting will be activated.

4 Audio Language (Default : Original)

Set the audio language.

Use [▲ / ▼] to select a language, then press [ENTER].



Your setting will be activated.

- When "Original" is selected, the audio language will be in the disc's default language.

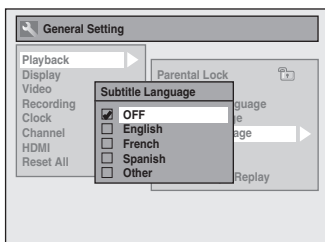
GENERAL SETTING

Playback (cont'd)

5 Subtitle Language (Default : OFF)

Set the subtitle language.

Use **[▲ / ▼]** to select a language, then press **[ENTER]**.



Your setting will be activated.

If "Other" is selected for **[3]** to **[5]**, press 4-digit code using **[the Number buttons]**.



- When you finish entering the code, press **[ENTER]**. Refer to the language code table on page 110.

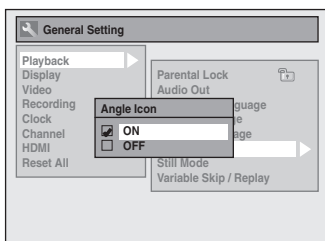
Note

- Only the languages supported by the disc can be selected.
- Audio language setting may not be available to some discs.
- You can also change or switch off the subtitles on a DVD from the disc menu if it is available.
- Press **[CLEAR]** to erase numbers entered incorrectly.

6 Angle Icon (Default : ON)

Set to "ON" to show the angle icon during the playback.

Use **[▲ / ▼]** to select a setting, then press **[ENTER]**.

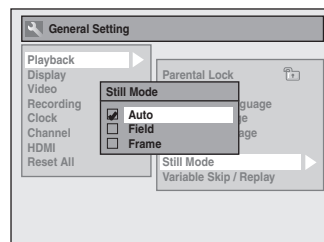


Your setting will be activated.

7 Still Mode (Default : Auto)

Select "Auto" usually.

Use **[▲ / ▼]** to select a setting, then press **[ENTER]**.



Your setting will be activated.

Auto : Optimum resolution setting ("Field" or "Frame") will be selected.

Field : Images in the still mode will be stabilized.

Frame : Images in the still mode will be highly defined.

Note

- Frame is one completed video image made up of two fields (There are 30 frames per second of NTSC video).

8 Variable Skip / Replay

Assign **[VARIABLE SKIP →]** or **[VARIABLE REPLAY ↶]** to skip or rewind by a certain amount of time when they are pressed.

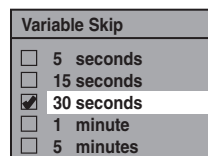
Use **[▲ / ▼]** to select a desired item, then press **[ENTER]**.



Refer to the explanations below and set the selected item.

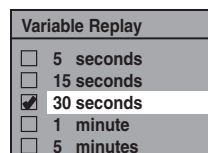
A Variable Skip (Default: 30 seconds)

Sets the amount of skip time for **[VARIABLE SKIP →]**.

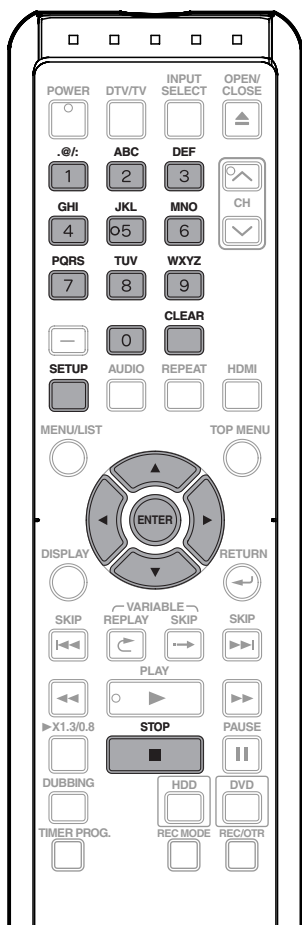


B Variable Replay (Default: 30 seconds)

Sets the amount of rewind time for **[VARIABLE REPLAY ↶]**.



Display



Press [STOP ■] if you are playing back an HDD or a disc.

1 Press [SETUP] and use [▲ / ▼] to select "General Setting", then press [ENTER].

2 Use [▲ / ▼] to select "Display", then press [ENTER].

3 Use [▲ / ▼] to select a desired item, then press [ENTER].

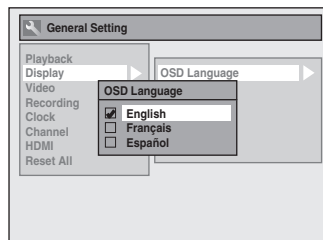
- 1 OSD Language
- 2 Screen Saver
- 3 FL Dimmer
- 4 DTV CC
- 5 CC Style
- 6 V-Chip

Submenu will appear.

1 OSD Language (Default : English)

Set the language for the on-screen display.

Use [▲ / ▼] to select a language, then press [ENTER].

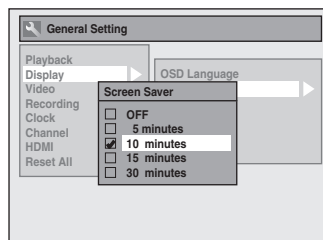


Your setting will be activated.

2 Screen Saver (Default : 10 minutes)

Set the time to activate the screen saver function on the TV screen.

Use [▲ / ▼] to select a setting, then press [ENTER].

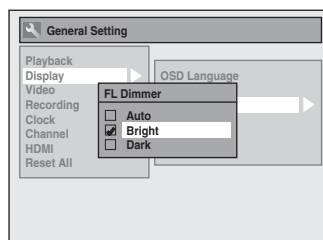


Your setting will be activated.

3 FL Dimmer (Default: Bright)

Set the front panel display brightness.

Use [▲ / ▼] to select a setting, then press [ENTER].



You can choose one from "Auto", "Bright" or "Dark". If "Auto" is selected, the display gets dark when the power is off.

4 DTV CC

Refer to "DTV Closed Caption" and "Recording the DTV Closed Caption" on page 36 and 45.

5 CC Style

Refer to "Closed Caption Style" on pages 37-38.

GENERAL SETTING

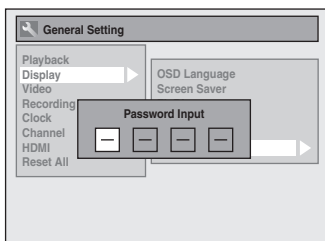
Display (cont'd)

6 V-Chip

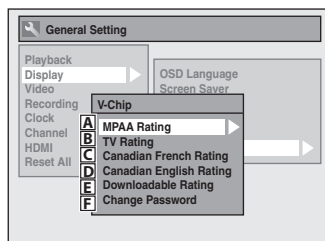
With the v-chip system in this unit, you can set the viewing limitation for the analog/digital TV programs received from the tuner or recorded on DVDs to prevent your children from watching inappropriate programs. If the unit detects a blocked program, a restriction message appears and you are not allowed to view or record the program.

1) Use [the Number buttons] to enter the access password.

If you have not set the password, first, use [the Number buttons] to set the access password, then press [ENTER]. The number you entered will be stored as the access password.



2) Use [▲ / ▼] to select a desired item, then press [ENTER].



A MPA Rating

B TV Rating

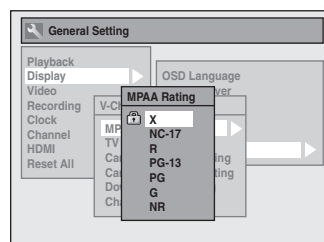
C Canadian French Rating

D Canadian English Rating

You can set the viewing limitation according to MPA rating (US movie ratings), TV Rating (US TV program ratings), Canadian French Rating (Canadian French language Ratings), Canadian English Rating (Canadian English language Ratings).

1) Use [▲ / ▼] to select the desired rating, then press [ENTER] repeatedly to switch between view and block. When it is blocked a key icon will appear.

e.g.) MPA rating



[MPAA Rating]

Rating	Category	
X	Mature audience only	<div style="display: flex; align-items: center;"> <div style="flex: 1; border-left: 2px solid black; border-right: 2px solid black; height: 100px; margin: 0 10px;"></div> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-weight: bold;">higher</div> </div> <div style="display: flex; align-items: center; margin-top: 10px;"> <div style="flex: 1; border-left: 2px solid black; border-right: 2px solid black; height: 100px; margin: 0 10px;"></div> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-weight: bold;">lower</div> </div>
NC-17	No one under 17 admitted	
R	Restricted; under 17 requires accompanying parent or adult guardian	
PG-13	Unsuitable for children under 13	
PG	Parental guidance suggested	
G	General audience	
NR	No rating	

[TV Rating]

Rating	Category	
TV-MA	Mature audience only	<div style="display: flex; align-items: center;"> <div style="flex: 1; border-left: 2px solid black; border-right: 2px solid black; height: 100px; margin: 0 10px;"></div> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-weight: bold;">higher</div> </div> <div style="display: flex; align-items: center; margin-top: 10px;"> <div style="flex: 1; border-left: 2px solid black; border-right: 2px solid black; height: 100px; margin: 0 10px;"></div> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-weight: bold;">lower</div> </div>
TV-14	Unsuitable for children under 14	
TV-PG	Parental guidance suggested	
TV-G	General audience	
TV-Y7	Appropriate for all children 7 and older	
TV-Y	Appropriate for all children	
NR	No rating	

[Canadian French Rating]

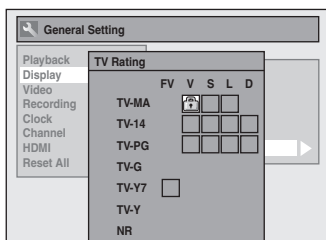
Rating	Category	
18 ans+	Adult audience only	<div style="display: flex; align-items: center;"> <div style="flex: 1; border-left: 2px solid black; border-right: 2px solid black; height: 100px; margin: 0 10px;"></div> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-weight: bold;">higher</div> </div> <div style="display: flex; align-items: center; margin-top: 10px;"> <div style="flex: 1; border-left: 2px solid black; border-right: 2px solid black; height: 100px; margin: 0 10px;"></div> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-weight: bold;">lower</div> </div>
16 ans+	Unsuitable for ages under 16	
13 ans+	Unsuitable for ages under 13	
8 ans+	Unsuitable for ages under 8	
G	General audience	
E	Exempt program	

Display (cont'd)

[Canadian English Rating]

Rating	Category	
18+	Adult audience only	<div style="text-align: center;"> higher ↑ ↓ lower </div>
14+	Unsuitable for ages under 14	
PG	Parental guidance suggested	
G	General audience	
C8+	For children over 8	
C	For all children	
E	Exempt program	

As for TV Rating's TV-MA, TV-14, TV-PG, or TV-Y7, you can further set the sub ratings to block specific elements of programming. Press [▲ / ▼ / ◀ / ▶] to select the desired rating or sub rating, then press [ENTER] repeatedly to switch between view and block. Sub rating status will appear on the side of the main rating.



Sub Rating	Category	Rating
FV	Fantasy Violence	TV-Y7
V	Violence	TV-PG
S	Sexual Situation	TV-14
L	Coarse Language	TV-MA
D	Suggestive Dialogue	TV-PG, TV-14

Note

- Changing the main rating to block or view automatically changes all its sub ratings to the same (block or view).

E Downloadable Rating

Set the rating system via digital broadcasting, or clear the downloaded ratings.

This feature is available only after the digital TV ratings have been downloaded

- The ratings can be downloaded by the unit automatically if it is available in your area.

If the broadcasting signal does not have the downloadable rating information, the message below will appear.

Downloadable Rating is currently not available.

- This message will also appear when you try to access "DOWNLOADABLE RATING" after you have cleared the downloadable rating information, and the new information has not been downloaded.

To set the rating:

Use [▲ / ▼] to select "BLOCK SETTING" then press [ENTER] to show the various types of ratings. Use [▲ / ▼] to select a desired rating to set, then press [ENTER] to show the levels for the rating. Use [▲ / ▼] to select a level, then press [ENTER] to switch "VIEW" or "BLOCK". If you set one level to "BLOCK", all the higher levels will be turned to "BLOCK" automatically.

Note

- Depending on the type of rating system, you may set the levels individually.
- The downloaded rating does not block the DVD contents.

To clear the downloadable rating information and its setting:

Use [▲ / ▼] to select "CLEAR DOWNLOADABLE RATING", then press [ENTER].

F Change Password

Change the current password.

Use [the Number Buttons] to enter new access password.

Note

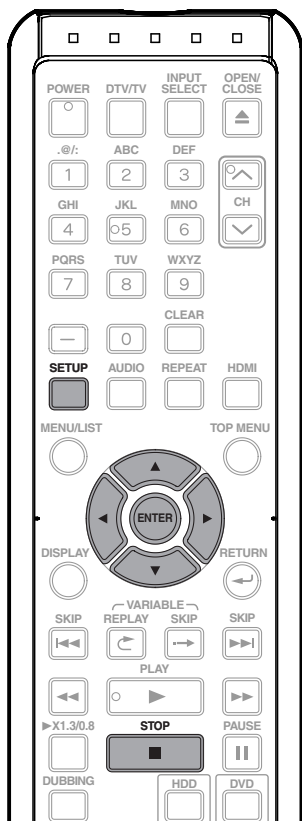
- Press [CLEAR] to erase numbers entered incorrectly.
- When you forgot the access password, enter 4,7,3,7 using [the Number buttons] in password input window. Password will be cleared.

4

Press [SETUP] to exit.

GENERAL SETTING

Video

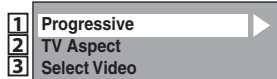


Press [STOP ■] if you are playing back an HDD or a disc.

1 Press [SETUP] and use [▲ / ▼] to select "General Setting", then press [ENTER].

2 Use [▲ / ▼] to select "Video", then press [ENTER].

3 Use [▲ / ▼] to select a desired item, then press [ENTER].



Submenu will appear.

4 Refer **1** to **2** on this page and set the selected item.

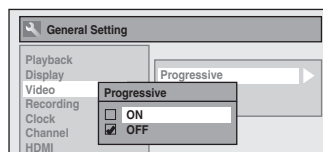
- For **3**, refer to "Connection to an External Device" on page 53.

5 When you finish with the setting, press [SETUP] to exit.

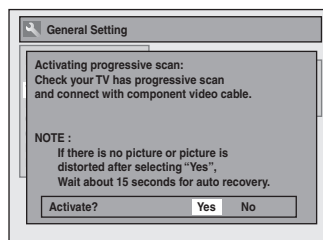
1 Progressive (Default : OFF)

This unit is compatible with the progressive scan system. The feature provides you with the higher definition images than the traditional output system does. To utilize this feature, you must set progressive scan mode to "ON".

1) Use [▲ / ▼] to select "ON", then press [ENTER].



2) Use [◀ / ▶] to select "Yes", then press [ENTER].



3) Use [▲ / ▼] to select "Yes" within 15 seconds, then press [ENTER].

Your setting will be activated.

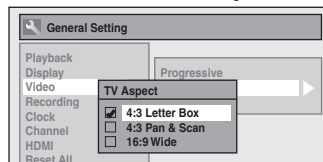
Note

- If your TV is compatible with progressive scan (480p), you are recommended to use the HDMI or component video cable (commercially available) to connect this unit to the TV. (Refer to "Method 3" on page 20 or page 21.) If not, use the RCA video cable and set the progressive scan to "OFF".
- If the Progressive Scan image is distorted, you can cancel Progressive Scan by pressing and holding [SETUP] for more than 3 seconds during HDD/DVD playback. The "Progressive" setting will be "OFF".
- When selecting "No" or not pressing any buttons on the unit or remote control within 15 seconds at step 3, progressive scan remains to be "OFF" (interlace scan).

2 TV Aspect (Default: 4:3 Letter Box)

You can select the TV aspect ratio to match the formats of what you are playing back with the unit and your TV screen (4:3 standard or 16:9 widescreen TV).

Use [▲ / ▼] to select a desired option, then press [ENTER].



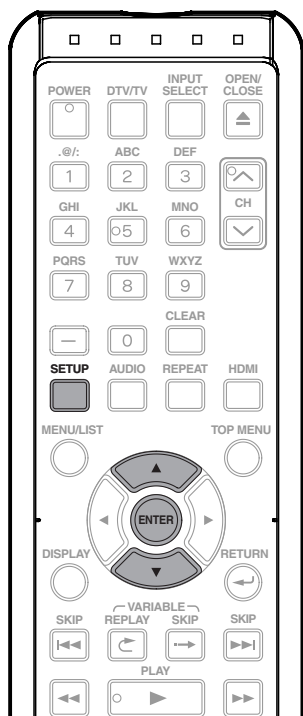
If you have a standard TV:

Select "4:3 Letter Box", so that black bars appear on the top and bottom of the TV screen when playing back a wide-screen picture. Select "4:3 Pan & Scan" for a full height picture with both sides trimmed when playing back wide-screen picture.

If you have a widescreen TV:

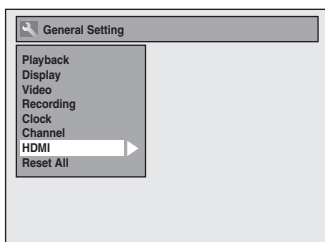
Select "16:9 Wide".

HDMI



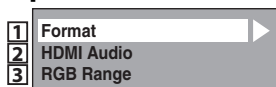
1 Press [SETUP] in stop mode and use [▲ / ▼] to select “General Setting”, then press [ENTER].

2 Use [▲ / ▼] to select “HDMI”, then press [ENTER].



- You cannot select HDMI when an HDMI cable is not connected and the items are shown in grey color.

3 Use [▲ / ▼] to select a desired item, then press [ENTER].

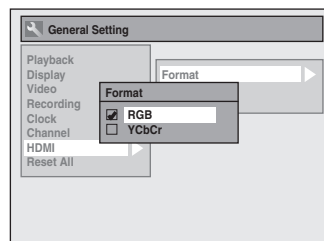


1 Format (Default : RGB)

You can select the color space for HDMI output. Set the appropriate color space for your display device.

Use [▲ / ▼] to select a setting, then press [ENTER].

- When the connected device is not compatible with the Y/Cb/Cr, HDMI signal is output as RGB regardless of the setting.



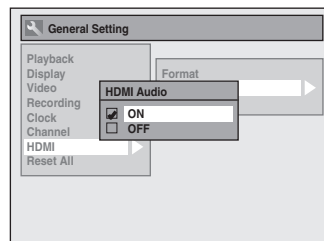
Your setting will be activated.

2 HDMI Audio (Default : ON)

If you do not want to output the audio through HDMI (when you digitally output the audio through the COAXIAL DIGITAL AUDIO OUTPUT jack to your audio system, etc.), you can set the HDMI audio output off.

Use [▲ / ▼] to select a setting, then press [ENTER].

- Set to “OFF” when the HDMI sound is not output.



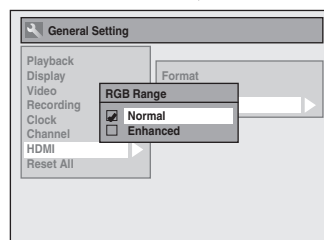
Your setting will be activated.

3 RGB Range (Default : Normal)

You can adjust the RGB range to make the dark areas of the HDMI images brighter.

Use [▲ / ▼] to select a setting, then press [ENTER].

- Select “Enhanced” if the black-white contrast is not clear.
- This setting is effective only for HDMI RGB output.



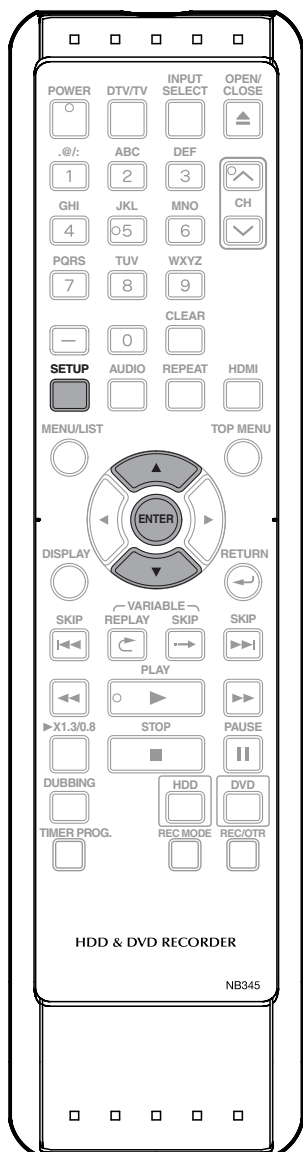
Your setting will be activated.

4 When you finish with the setting, press [SETUP] to exit.

GENERAL SETTING

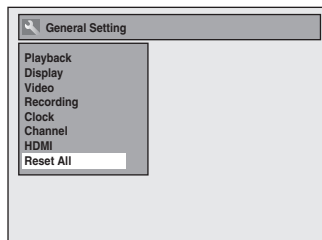
Reset All

Reset the setting to default.

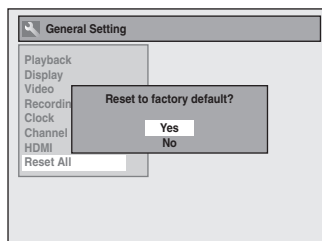


1 Press [SETUP] in stop mode and use [▲ / ▼] to select "General Setting", then press [ENTER].

2 Use [▲ / ▼] to select "Reset All", then press [ENTER].



3 Select "Yes" using [▲ / ▼], then press [ENTER].



"Are you sure?" will appear. Select "Yes" using [▲ / ▼] and then press [ENTER]. Your setting will be initialized.

Note


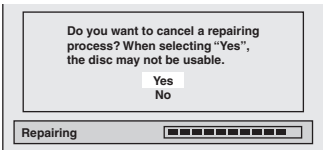


- The settings listed below will remain unchanged even after resetting to the factory default.
 - Clock setting
 - Channel setting
 - OSD language setting
 - Parental lock setting
 - V-Chip setting
 - Timer programs

TROUBLESHOOTING

Before requesting service for this unit, check the table below for a possible cause of the problem you are experiencing. Some simple checks or a minor adjustment on your part may eliminate the problem and restore proper operation.

	Symptom	Remedy
POWER	The power does not turn on.	<ul style="list-style-type: none"> Check that the AC power cord is connected securely. Batteries of the remote control are weak.
	The unit turns on automatically without any operation.	<ul style="list-style-type: none"> The unit turns on automatically 2 seconds before the timer recording.
GENERAL	The unit does not function.	<ul style="list-style-type: none"> "⊘" or error message appears if the operation is prohibited. Batteries of the remote control are weak or exhausted.
	No picture, sound or menu appears on the screen.	<ul style="list-style-type: none"> Check if the connections are made securely and correctly. Check if the cables are damaged. Check if a correct external input channel is selected on your TV. (Refer to page 27.) Check if you have completed the channel setting. (Refer to pages 28 to 30.)
	Clock setting and channel setting cannot be performed.	<ul style="list-style-type: none"> If a recording is in progress, these operations cannot be performed.
	The unit does not operate properly.	<ul style="list-style-type: none"> Moisture has condensed inside the unit. Remove the disc and leave the unit turned on for about 2 hours until the moisture evaporates. (Refer to page 4.)
	The clock display does not appear in the front panel display.	<ul style="list-style-type: none"> Check that the AC power cord is connected securely. (In case of power failure) Check the breaker and clock setting.
	When you forget the password for parental lock.	<ul style="list-style-type: none"> Please cancel the password and the set level. (Refer to page 96.)
	No analog TV closed captions are output.	<ul style="list-style-type: none"> If you are using HDMI connection to watch the TV programs through this unit's tuner, analog TV closed caption cannot be output. Try using other connection.
	DV signal cannot be input.	<ul style="list-style-type: none"> Before connection, turn on the power supplies for both this unit and the DVC, and make sure that these units have stopped. Only a "DVC-SD" signal can be input from the DVC to this unit. Other types of signals are not supported. Do not connect any device other than the DVC. Even if a recorder or PC with another DV terminal is connected, the DV function will not operate. If the DVC is not recognized after connection, turn off the power supply for the unit and re-connect the DVC.
	The DVC cannot be operated with this unit.	<ul style="list-style-type: none"> Signal input or DVC operation from this unit may be disabled depending on the type of DVC. If a DVC signal cannot be input, use an external input (L1/L2) for analog connection via audio/video cables. DVC control may be disabled depending on the type of DVC, even in a mode other than camera mode. In this case, switch to HDD/DVD control and execute the normal recording procedure while operating the DVC.
	Certain functions of the DVC cannot operate.	<ul style="list-style-type: none"> Some functions may not operate depending on the type of DVC. For example, if the DVC does not support slow playback mode, the slow playback function is disabled. With L3(DV-IN), the disc display menu does not appear unless disc playback is executed.
	DV audio signal cannot be switched.	<ul style="list-style-type: none"> For recording with the DVC, the recording audio signal can be set to 12 bits or 16 bits. However, when 16-bit recording mode is selected, audio signal cannot be switched. To record an audio signal, set it to 12 bits.
	No image from HDMI connection.	<ul style="list-style-type: none"> Check the HDMI connection. (Check the status of the HDMI related indications.) Check whether the connected monitor device or other device supports HDCP. (This unit will not output a video signal unless the other device supports HDCP.) Check the setting of HDMI. Check whether the output format of this unit (HDMI FORMAT) matches the supported input format of other connected device.

TROUBLESHOOTING

CHANNEL	TV channels cannot be changed.	<ul style="list-style-type: none"> • Check if the connections are made securely and correctly. • Check if the cables are damaged. • Try channel setting by following the steps on pages 28 to 31.
	Only specific channels do not appear.	• The channels may be set to be skipped. (Refer to pages 29-30.)
	The external input channels (such as L1, L2 or L3) cannot be skipped.	• This unit does not skip the external input channels. This is not a malfunction.
GENERAL	The image from the external device cannot be displayed.	<ul style="list-style-type: none"> • Try pressing [INPUT SELECT] repeatedly. • Turn on all connected devices. • Check if the connections are made securely and correctly.
	Some part of the recorded content has no image and sound.	• When you record the copy-protected programs, part of the recorded content may have no image and sound.
	Recording is impossible.	<ul style="list-style-type: none"> • It is prohibited to make a recording from 2 minutes before the programmed start time of a timer recording. • This unit cannot record programs that contain copy protection signal. This is not a malfunction. • The space of the recording media may be used up. Try deleting unnecessary titles, or exchange it with the recordable media. • The maximum number of titles or chapters has exceeded. Delete the unnecessary titles to make enough space or insert a new recordable media. • Check if the connections are made securely and correctly. • Check the external input channel.
HDD / DVD	Timer recording cannot be performed.	• The internal clock of the unit may have been stopped due to a power failure that lasted for more than 30 seconds. Reset the clock. (Refer to pages 31 to 32.)
	The picture of the autostart recording disappears.	• The contents of the autostart recording will be cleared in some cases (Changing input channel etc.). Refer to page 48.
	When playing back the title recorded from the autostart recording, the DTV program information is displayed and it cannot be disappeared.	• In the autostart recording, when you display the DTV program information, the information will be recorded as the part of the picture.
RECORDING	"Repairing" appears on the TV screen. 	<ul style="list-style-type: none"> • If there is a power failure or unplugging during recording, finalizing, formatting or editing (even after "Repairing" disappears), a repairing process will begin automatically just after turning the unit on again. It may take several minutes up to about several hours.
	In a case you intend to cancel the repairing process. 	<ul style="list-style-type: none"> • If you intend to cancel the repairing process, press [▲ OPEN/CLOSE] on the front panel, then select "Yes" and press [ENTER]. After that, press [OPEN/CLOSE ▲] to take out the disc. The disc canceled during the repairing process MAY NOT work.
	Recording is impossible.	<ul style="list-style-type: none"> • Check if the disc is protected or finalized. Undo the protection or the finalization. • Video mode DVD-RW once formatted on other unit cannot be recorded on this unit unless all the contents in the disc are erased. • Check if the connections are made securely and correctly.
DVD	The indication  does not disappear.	<ul style="list-style-type: none"> • " 100%" may remain on screen for the maximum of 20 seconds even after it reached 100%. This is not a malfunction.

TROUBLESHOOTING

PLAYBACK	GENERAL	TV aspect ratio does not match your TV screen.	<ul style="list-style-type: none"> • Check the TV Aspect Ratio. (Refer to page 102.) • A different aspect ratio will be used when the aspect ratio specified by the disc is not supported by this unit.
		Playback picture is distorted. Color of the picture is abnormal.	<ul style="list-style-type: none"> • During fast forward or fast reverse, playback picture may be distorted. This is not a malfunction. • Connect to TV directly. When you connect this unit with the television via VCR or other devices, the picture may be distorted due to the copy-protection signal. • Check if the cables are damaged. • Keep the equipment which may cause electrical disturbances, such as a cellular phone, away.
		There is no sound, or no subtitle.	<ul style="list-style-type: none"> • Turn on all connected devices. • Check if the external input channel is set correctly. • Check if the connections are made securely and correctly. • If using the HDMI connection, sound is not output when "HDMI Audio" is set to "OFF". • Check the RCA audio cable connection. If you are using HDMI-DVI conversion cable, you must connect the RCA audio cable, too. • If using the HDMI connection, check whether the output format of this unit (HDMI FORMAT) matches the supported input format of other connected device.
	HDD/DVD	Playback does not start from the beginning.	<ul style="list-style-type: none"> • Resume function may be activated. Refer to page 67 to cancel the resume point.
		Playback image freezes for a second.	<ul style="list-style-type: none"> • During the playback of 2 layered disc, picture may freeze for a moment when the 1st layer switches to the 2nd layer. This is not a malfunction.
		Playback cannot be performed.	<ul style="list-style-type: none"> • Check if the playable disc is inserted. • Check if the disc is loaded correctly with the labeled side facing up. • Discs made on other devices or on personal computers cannot be played back on this unit unless it is finalized on the device. Even if it is finalized, the performance of those discs are not guaranteed on this unit. • The disc may be dirty or flawed. Clean the disc. • Check if all the connections are made correctly. • Check the parental lock setting. (Refer to page 96.) • Playback of DVD is prohibited from 2 minutes before the programmed start time of a timer recording when the recording media is DVD.
	DVD	There is no sound, or no subtitle.	<ul style="list-style-type: none"> • Check if the "Audio Out" is set correctly. (Refer to page 97.) • There is a possibility that the selected subtitle language is not supported by the disc.
		Digital audio setting cannot be changed to main audio (L), sub audio (R) or combination of both.	<ul style="list-style-type: none"> • If the audio source is in the Dolby Digital format, set the Dolby Digital Setting to "PCM" in "Playback" menu. (Refer to page 97.)
		Audio language or the subtitle language of the DVD cannot be changed.	<ul style="list-style-type: none"> • Multilingual subtitles are not supported by the disc. • Some audio languages or the subtitle languages can be changed only from the disc menu. Please refer to the disc's manual.
		Camera angles cannot be changed.	<ul style="list-style-type: none"> • Even though the multi-angle feature is supported by the disc, that does not mean all the scenes are shot from multi-angles. Changing angles are available only for those scenes shot from the multi-angle.
		The disc cannot be played back on other player even though it is finalized properly.	<ul style="list-style-type: none"> • Some DVD players do not play back the disc made on other recorder. Refer to the manual of the unit.

Introduction

Connections

Basic Setup

Disc Management

Recording

Playback

Editing

Function Setup

Others

Español

TROUBLESHOOTING

EDITING	HDD / DVD	Titles cannot be edited or deleted.	<ul style="list-style-type: none"> • The titles or the disc itself may be protected. Cancel the protection by following the steps on page 89 for title protection and page 41 for disc protection.
		Dubbing cannot be executed.	<ul style="list-style-type: none"> • When the number of the titles or the chapters exceeds the maximum recordable number, the dubbing will not be executed.
	DVD	Titles cannot be edited or deleted.	<ul style="list-style-type: none"> • The titles in the DVD-R cannot be edited or deleted if they are finalized. If it is video mode DVD-RW, undo the finalization by following the steps on page 43.
		The capacity of the disc doesn't increase even if the recorded program is deleted.	<ul style="list-style-type: none"> • With video mode DVD-RW, the disc space will increase only when the last title is deleted. With DVD-R, deleting a title will not increase the disc space.
		Dubbing cannot be executed.	Check if the disc is compatible for recording (refer to pages 10-11).
REMOTE CONTROL		The remote control does not function.	<ul style="list-style-type: none"> • No batteries in the remote or the batteries may be weak. Replace the batteries. • Make sure there is no obstacle between the remote and the unit. • Try getting closer to the unit. (Refer to page 14.) • If above solutions do not solve the problem, please call an Authorized Service Center.

Frequently Asked Questions

– Can I record to CD-RW/-R?	No, this unit records only HDD/DVD.
– Can I play back DVD-video that is bought in another country?	Possible when the region code of the disc is 1 and All.
– Can I connect the unit to my PC?	No, you cannot control the unit by PC.
– Can I program a timer recording with cable/satellite box?	Yes, you can. Select “L1” or “L2” as your recording channel, and leave the cable / satellite box on (pages 19, 53-54).
– Can I record one channel while watching another channel using a cable / satellite box?	It depends on your connection configurations. For more details, please kindly contact your cable / satellite provider.
– Can I connect this unit directly to a TV which only has an antenna in jack using an RF coaxial cable?	No. You need an RF modulator (commercially available) to connect this unit to a TV which only has an antenna in jack (page 18). This unit does not have an RF modulator.
– Can I change the channels on the cable / satellite box using the remote control of this unit?	No. Changing the channels on the cable / satellite box using this unit's remote control is not possible. You need to use the remote control supplied with the cable / satellite box to change the channels on the cable / satellite box.

TROUBLESHOOTING

Error message	Cause	Solution
Disc Error — Please eject the disc. — Playback feature may not be available on this disc.	<ul style="list-style-type: none"> Unplayable disc is inserted in the unit. The disc is upside down. 	<ul style="list-style-type: none"> Insert the standardized disc which have the marks on pages 10-11. Insert the disc with the labeled side facing up.
Region Error — Please eject the disc. — Playback is not authorized in your region.	<ul style="list-style-type: none"> Playback is not authorized in the region of the DVD-video which you inserted in the unit. 	<ul style="list-style-type: none"> Insert the DVD-video with region codes 1 or ALL.
Parental Lock On The current selected parental level prohibits playback.	<ul style="list-style-type: none"> The current selected parental level prohibits playback. 	<ul style="list-style-type: none"> Check "Parental Lock" setting in "Playback" menu (page 96).
Recording Error This program is not allowed to be recorded.	<ul style="list-style-type: none"> You are trying to record the copy prohibited program. 	<ul style="list-style-type: none"> You cannot record copy prohibited programs.
Recording Error This program is not recordable in Video mode.	<ul style="list-style-type: none"> You are trying to record the copy-once program onto the DVD-RW in Video mode. 	<ul style="list-style-type: none"> Set "Format Mode" to "VR mode" (pages 39-40).
Recording Error Can not record on this disc.	<ul style="list-style-type: none"> You are trying to record onto the disc which is unrecordable, or the disc status is unable to record. The disc is dirty. The disc is damaged. 	<ul style="list-style-type: none"> Insert the recordable disc, and ensure the disc status satisfies the recording requirements (pages 10-11). Clean the disc with a cleaning cloth. Replace the disc.
Recording Error This program is not allowed to be recorded on this disc.	<ul style="list-style-type: none"> You are trying to record the copy-once program onto the DVD-RW disc which is not compatible with CPRM. 	<ul style="list-style-type: none"> Insert the DVD-RW disc in VR mode (ver.1.1 or 1.2 compatible with CPRM).
Recording Error This disc is protected and not recordable.	<ul style="list-style-type: none"> You are trying to record onto the protected disc which is set in "DVD Menu" menu. 	<ul style="list-style-type: none"> Release the disc protect setting in "DVD Menu" menu (page 41).
Recording Error Disc is full. (No area for new recording)	<ul style="list-style-type: none"> You are trying to record onto the disc which has no space for recording. 	<ul style="list-style-type: none"> Insert the recordable disc with enough recording space.
Recording Error You cannot record more than 99 titles on one disc. (The maximum is 99)	<ul style="list-style-type: none"> You are trying to record onto the DVD-RW/-R on which the number of recording titles comes up to the maximum (99). 	<ul style="list-style-type: none"> Delete unnecessary titles (pages 77-79).
Recording Error You cannot record more than 999 chapters on one disc. (The maximum is 999)	<ul style="list-style-type: none"> You are trying to record onto the VR mode DVD-RW on which the number of recording chapters comes up to the maximum (999). 	<ul style="list-style-type: none"> Delete unnecessary chapter marks (page 84).
Recording Error You cannot record on this disc as Control Information is full.	<ul style="list-style-type: none"> This disc has no space to write the Control Information when recording or deleting contents. When editing has been repeatedly performed, the control Information area may come up to be full even the recording area has enough space. 	<ul style="list-style-type: none"> Delete unnecessary titles (pages 77-79).
Recording Error You cannot record on this disc as Power Calibration Area is full.	<ul style="list-style-type: none"> When recordings are performed repeatedly onto an unstable disc, this area may come up to be full. Every time you insert a disc for recording, the disc's working area will be taken up. And if you repeat this frequently, it will be used up sooner and you may not be able to record full 99 titles. 	<ul style="list-style-type: none"> Insert a new disc.
Recording Error This disc is already finalized.	<ul style="list-style-type: none"> You are trying to record onto the disc already finalized. 	<ul style="list-style-type: none"> Undo the finalizing for this disc (page 43).
Recording Error You cannot record more than 600 titles on HDD. (The maximum is 600).	<ul style="list-style-type: none"> You are trying to record onto the HDD when total title number is already at its limit. 	<ul style="list-style-type: none"> Delete unnecessary titles (pages 77-79).
Recording Error Cannot record on this HDD.	<ul style="list-style-type: none"> The internal HDD is dirty or damaged. 	<ul style="list-style-type: none"> Contact the customer service center.
Recording Error HDD is full. (No area for new recording)	<ul style="list-style-type: none"> There is not enough space on the internal HDD. 	<ul style="list-style-type: none"> Delete unnecessary titles (pages 77-79).

* If you are still having trouble with the unit after checking "TROUBLESHOOTING", write down the error code and the error description for calling our help line to locate an Authorized Service Center.

LANGUAGE CODE

Language	Code
Abkhazian	4748
Afar	4747
Afrikaans	4752
Albanian	6563
Amharic	4759
Arabic	4764
Armenian	5471
Assamese	4765
Aymara	4771
Azerbaijani	4772
Bashkir	4847
Basque	5167
Bengali;Bangla	4860
Bhutani	5072
Bihari	4854
Bislama	4855
Breton	4864
Bulgarian	4853
Burmese	5971
Byelorussian	4851
Cambodian	5759
Catalan	4947
Chinese	7254
Corsican	4961
Croatian	5464
Czech	4965
Danish	5047
Dutch	6058
English	5160
Esperanto	5161
Estonian	5166
Faroese	5261
Fiji	5256
Finnish	5255
French	5264
Frisian	5271
Galician	5358
Georgian	5747
German	5051
Greek	5158
Greenlandic	5758
Guarani	5360
Gujarati	5367
Hausa	5447
Hebrew	5569
Hindi	5455

Language	Code
Hungarian	5467
Icelandic	5565
Indonesian	5560
Interlingua	5547
Interlingue	5551
Inupiak	5557
Irish	5347
Italian	5566
Japanese	5647
Javanese	5669
Kannada	5760
Kashmiri	5765
Kazakh	5757
Kinyarwanda	6469
Kirghiz	5771
Kirundi	6460
Korean	5761
Kurdish	5767
Laothian	5861
Latin	5847
Latvian; Lettish	5868
Lingala	5860
Lithuanian	5866
Macedonian	5957
Malagasy	5953
Malay	5965
Malayalam	5958
Maltese	5966
Maori	5955
Marathi	5964
Moldavian	5961
Mongolian	5960
Nauru	6047
Nepali	6051
Norwegian	6061
Occitan	6149
Oriya	6164
Oromo (Afan)	6159
Panjabi	6247
Pashto; Pushto	6265
Persian	5247
Polish	6258
Portuguese	6266
Quechua	6367
Rhaeto-Romance	6459
Romanian	6461

Language	Code
Russian	6467
Samoan	6559
Sangho	6553
Sanskrit	6547
Scots Gaelic	5350
Serbian	6564
Serbo-Croatian	6554
Sesotho	6566
Setswana	6660
Shona	6560
Sindhi	6550
Singhalese	6555
Siswat	6565
Slovak	6557
Slovenian	6558
Somali	6561
Spanish	5165
Sundanese	6567
Swahili	6569
Swedish	6568
Tagalog	6658
Tajik	6653
Tamil	6647
Tatar	6666
Telugu	6651
Thai	6654
Tibetan	4861
Tigrinya	6655
Tonga	6661
Tsonga	6665
Turkish	6664
Turkmen	6657
Twi	6669
Ukrainian	6757
Urdu	6764
Uzbek	6772
Vietnamese	6855
Volapuk	6861
Welsh	4971
Wolof	6961
Xhosa	7054
Yiddish	5655
Yoruba	7161
Zulu	7267

Analog Audio

An electrical signal that directly represents sound. Compare this to digital audio which can be an electrical signal, but is an indirect representation of sound. See also "Digital Audio".

Aspect Ratio

The width of a TV screen relative to its height. Conventional TVs are 4:3 (in other words, the TV screen is almost square); widescreen models are 16:9 (the TV screen is almost twice as wide as it is high).

Chapter (HDD/DVD)

Just as a book is split up into several chapters, a title on a HDD/DVD is usually divided into chapters. See also "Title".

Component Video Output

Each signal of luminance (Y) and component (P_B/C_B, P_R/C_R) is independent to output so that you can experience picture color as it is. Also, due to compatibility with progressive video (480p), you can experience higher-density picture than that in interlace (480i).

Digital Audio

An indirect representation of sound by numbers. During recording, the sound is measured at discrete intervals (44,100 times a second for CD audio) by an analog-to-digital converter, generating a stream of numbers. On playback, a digital-to-analog converter generates an analog signal based on these numbers. See also "Sampling Frequency" and "Analog Audio".

Dolby® Digital

The system to compress digital sound developed by Dolby Laboratories. It offers you sound of stereo(2ch) or multi channel audio.

Finalize

To make DVD, which have been recorded on, possible to play back in DVD players.

HDMI™ (high definition multimedia interface)

A digital interface between audio and video source. It can transmit component video, audio, and control signal with one cable connection.

JPEG (joint photographic experts group)

JPEG is a method of compressing still image files. You can copy JPEG files on CD-RW/-R from a computer and play back the files on this unit.

MP3 (MPEG audio layer 3)

MP3 is a method of compressing files. You can copy MP3 files on CD-RW/-R from the computer and play back the files on this unit.

PCM (pulse code modulation)

The most common system of encoding digital audio, found on CD and DAT. Excellent quality, but requires a lot of data compared to formats such as Dolby Digital and MPEG audio. For compatibility with digital audio recorders (CD, MD and DAT) and AV amplifiers with digital inputs, this unit can convert Dolby Digital and MPEG audio to PCM. See also "Digital Audio".

Progressive Scan (480p)

A type of display that does not split each frame into fields, and instead scans directly through all the scanlines of each frame in order. Progressive scan provides less flickering and higher image resolution than traditional (480i) TV signals. Refer to page 102 for instructions on selective progressive scan mode.

Region Code

Regions associate discs and players with particular areas of the world. This unit will only play back discs that have compatible region codes. You can find the region code of your unit by looking on the rear panel. Some discs are compatible with more than one region (or all regions).

Sampling Frequency

The rate which sound is measured by a specified interval to turn into digital audio data. The numbers of sampling in one second defines as sampling frequency. The higher the rate, the better the sound quality.

SAP (secondary audio program)

Sub-audio channel which is delivered separately from main-audio channel. This audio channel is used as an alternate in bilingual broadcasting.

S-Video Output

It delivers independently each signal of color(C) and luminance(Y) to TV as video signals, so that higher-quality picture will be gained.

Title (HDD/DVD)

A collection of chapters on HDD/DVD. See also "Chapter".

Track

Audio CD use tracks to divide up the content of a disc. The DVD equivalent is called a chapter. See also "Chapter".

Video mode

Video mode is the same recording format as used on the DVD videos you purchase in local shops. You can play back the discs recorded in this format in most DVD players, however it offers only limited editing. You will need to finalize discs recorded in video mode before playing them back on other unit.








VR mode











A basic recording format for DVD-RW. VR mode offers advanced editing, however it is playable only on VR mode compatible unit. Finalization is recommended before playing them back on other unit.



SPECIFICATIONS

- This model complies with the below specifications.
- Designs and specifications are subject to change without notice.
- This model may not be compatible with features and/or specifications that may be added in the future.

General	
System	HDD, DVD-RW/-R, DVD-video, CD-DA, CD-RW/-R
Power requirements	AC120 V, 60 Hz
Power consumption	33 W (standby: 5.7 W)
Weight	7.5 lbs (3.4 kg)
Dimensions (width x height x depth)	16.6" x 2.4" x 11.5" (420 x 59 x 290 mm)
Operating temperature	41 °F to 104 °F (5 °C to 40 °C)
Operating humidity	Less than 80% (no condensation)
TV format	ATSC / NTSC-M TV standard
Recording	
Recording format	VR (video recording) format Video format
Recording discs	DVD-Rewritable/-Recordable
Video recording format	
Sampling frequency	13.5 MHz
Compression format	MPEG
Audio recording format	
Sampling frequency	48 kHz
Compression format	Dolby Digital
Tuner	
Tuning system	Channel frequency synthesized tuning system
Channel coverage (ATSC / NTSC)	
Terrestrial	VHF 2~13, UHF 14~69
CATV	2~13, A~W, W+1~W+94 (analog W+1~W+84), A-5~A-1, 5A
Input / Output	
VHF/UHF antenna input/output terminal	VHF/UHF set 75Ω
Video input	
Input level	Input 1 (rear), 2 (front) 1 Vp-p (75Ω)
Jacks	RCA jack
Video output	
Output level	Output 1 (rear) 1 Vp-p (75Ω)
Jack	RCA jack
S-video input	
Y (luminance) - Input level	Input 1 (rear), 2 (front) 1 Vp-p (75Ω)
C (color) - Input level	286 mVp-p (75Ω)
Jacks	4 pin mini DIN
S-video output	
Y (luminance) - Output level	Output 1 (rear) 1 Vp-p (75Ω)
C (color) - Output level	286 mVp-p (75Ω)
Jack	4 pin mini DIN
Component video output	
Output level	Output 1 (rear) Y: 1.0 Vp-p (75Ω), Pb/Cb, Pr/Cr: 0.7 Vp-p (75Ω)
Jacks	RCA jacks
HDMI output	
Jack	HDMI jack
Audio input	
During audio input	Input 1 (rear), 2 (front) L/R 2 V rms (input impedance: more than 22 kΩ)
Jacks	RCA jacks
Audio output	
During audio output	Output 1 L/R (rear) 2 V rms (output impedance: less than 1 kΩ)
Jacks	RCA jacks
Digital audio output	
Output level	Output 1 (rear) COAXIAL 500 mVp-p (75Ω)
Jack	RCA jack
DV input	
Jack	IEEE 1394 DV input jack (4 pin)

Discos grabables y reproducibles				
Tipo de disco	DVD-RW		DVD-R	HDD
Logotipo				
Formato	Puede formatearse en modo VR o modo de video		Formateado automáticamente en modo de video	—
Icono	Modo de video	Modo VR		
				
Tiempo máximo de grabación	480 min (12cm) 144 min (8cm)	480 min (12cm) 144 min (8cm)	480 min (12cm) 144 min (8cm)	240 hrs (con el modo SLP)
Versiones grabables/reproducibles	Versione 1.1,1.2 Versione 1.1/2× CPRM compatible Versione 1.2/4× CPRM compatible		Versione 2.0 Versione 2.0/4× Versione 2.0/8× Versione 2.0/16×	—
Compatibilidad	Se puede reproducir en la mayoría de los reproductores de DVD. Es necesario finalizar. (se creará el menú de títulos)	Se puede reproducir sólo en unidades compatibles con el modo VR. Se recomienda finalizar.	Se puede reproducir en la mayoría de los reproductores de DVD. Es necesario finalizar. (se creará el menú de títulos)	—

Discos reproducibles				
Tipo de disco	DVD-VIDEO	CD-DA	CD-RW	CD-R
Logotipo			 	 
Icono				

Archivos reproducibles		
Título de disco	MP3	JPEG
Icono		
Medio	CD-RW/-R	CD-RW/-R

 es una marca registrada de DVD Format/Logo Licensing Corporation.

Discos no Reproducibles

En este aparato no se podrán reproducir los siguientes discos.

- CD-ROM
- Disco compacto interactivo (CD-I)
- Disco simple de video (VSD)
- DVD-ROM
- Audio en DVD
- Disco sin finalizar
- El DVD contiene archivos MP3, WMA o JPEG
- DVD-RW/-R grabado en formato de grabación no compatible
- Discos Blu-ray
- HD DVD
- CD de super video

En el siguiente disco, es posible que no se escuche el sonido.

- Super audio CD - Sólo se podrá escuchar el sonido de la capa del CD. No se podrá escuchar el sonido de la capa de alta densidad de un super audio CD.

Sistemas de Color

Los discos DVD son grabados en el mundo en distintos sistemas de color. El sistema de color más común es el NTSC (que es utilizado principalmente en los Estados Unidos y Canadá).

Este equipo utiliza NTSC, de modo que los discos DVD que reproduzca deben estar grabados en el sistema NTSC. Usted no puede reproducir discos DVD grabados en otros sistemas de color.

Códigos de Región

Este equipo ha sido diseñado para reproducir discos DVD rotulados para la región 1. Para poder ser reproducidos en el equipo los DVD deben estar rotulados para ALL las regiones o para la región 1. No se pueden reproducir DVD que estén rotulados para otras regiones. Busque los símbolos a la derecha de su DVD. Si en su DVD no aparecen estos símbolos regionales, el mismo no se podrá reproducir en este aparato.

El número presente en el interior el globo se refiere a una región del mundo.

Un DVD rotulado para una región específica puede reproducirse únicamente en equipos con el mismo código de región.

Los siguientes discos se recomiendan para obtener una buena calidad de grabación y han sido comprobados como compatibles con este aparato. Sin embargo, según sea la condición del medio el equipo podría no leer el disco correctamente.

Verbatim DVD-R 8x, DVD-RW 2x
JVC DVD-RW 4x
Maxell DVD-R 8x/16x

El comportamiento de cualquier otro disco no está garantizado.

Los reproductores de DVD con  COMPATIBLE pueden reproducir DVD-RW grabados en modo VR.



Conexión Básica

- 1) Desconecte el cable de alimentación de su televisor del tomacorriente de CA.
- 2) Efectúe la conexión como se ilustra abajo.

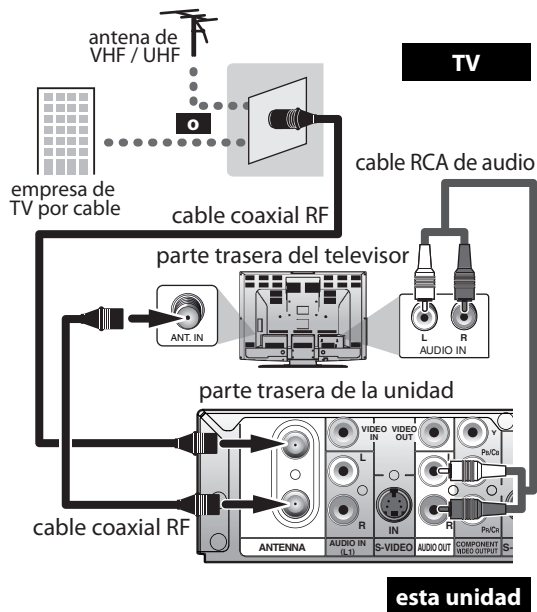
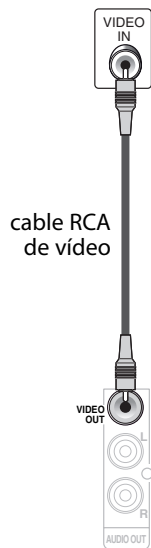
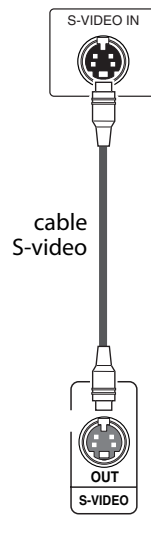


imagen normal



VIDEO OUT

imagen buena



S-VIDEO OUT

imagen mejor



COMPONENT VIDEO OUTPUT

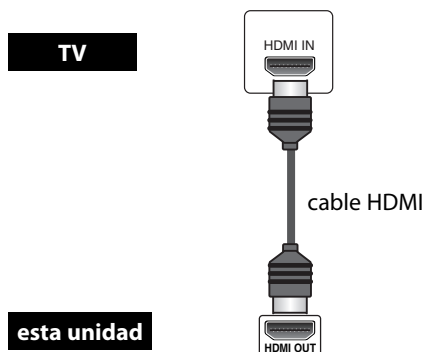
Cables suministrados:

- cable coaxial RF x 1
 - cable RCA de audio (L/R) x 1
 - cable RCA de vídeo x 1
- Por favor, compre el resto de los cables necesarios en su tienda local.

- 3) Enchufe los cables de alimentación de los aparatos al tomacorriente de CA.

Conexión a un Televisor con un Puerto Compatible con HDMI™

Conectar esta unidad a un dispositivo con un toma HDMI (Interface de Multimedia de Alta Definición) que utilice un solo cable hace posible la transferencia digital tanto de señales de imagen digital como de señales de sonido con múltiples canales.



Modo HDMI y señales efectivas de salida

Presione [HDMI] para seleccionar el modo de salida HDMI. Cada vez que se presiona [HDMI] el modo de salida varía como sigue.

Pantalla del panel frontal	Señal de salida de video
480P	Progresivo de 480
Presione [HDMI]	↓
720P	Progresivo de 720
Presione [HDMI]	↓
1080i	1080 entrelazado
Presione [HDMI]	↓
1080P	Progresivo de 1080
Presione [HDMI]	

- El modo HDMI que no esté admitido por el dispositivo de exhibición será pasado por alto.

Cables no incluidos.

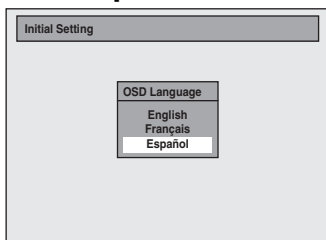
Adquiera los cables necesarios en una tienda de su zona.

Configuración Inicial

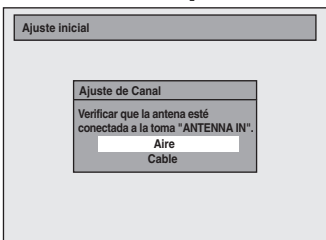
Cuando usted encienda este aparato por primera vez necesita seguir estos pasos.

1 Presione [POWER].
Encienda el televisor. Seleccione la entrada a la cual está conectado el aparato.

2 Utilice [▲ / ▼] para seleccionar su idioma deseado, y luego presione [ENTER] para establecerlo.



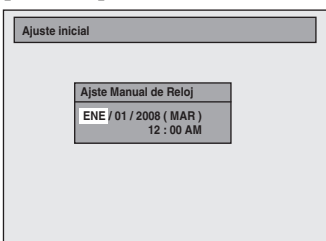
3 Utilice [▲ / ▼] para seleccionar el tipo de presintonía del canal deseado, y a continuación, presione [ENTER].



La unidad comenzará a recibir los canales disponibles en su zona.

4 Presione [ENTER] para activar "Ajuste Manual de Reloj".

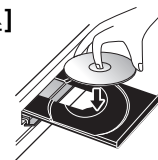
5 Utilice [◀ / ▶] para seleccionar un elemento a configurar, y utilice [▲ / ▼] para seleccionar el contenido de su preferencia, y luego presione [ENTER].



Grabación Básica

Si usted está reproduciendo los títulos de una unidad de disco rígido, presione primero [HDD] y luego continúe al paso 2. Si usted está reproduciendo los títulos de un DVD, presione primero [DVD].

1 Presione [OPEN/CLOSE ▲] para abrir la bandeja de discos e insertar su disco con el rótulo apuntando hacia arriba. Presione de nuevo [OPEN/CLOSE ▲] para cerrar la bandeja de discos.



* Asegúrese de que el disco sea compatible con este aparato. (Para obtener la lista de discos compatibles consulte la página 31.)

2 Para seleccionar un modo de grabación presione [REC MODE].

Modo de grabación	Tiempo de grabación			Calidad del video y el sonido
	Disco de 8 cm	Disco de 12 cm	HDD (interno)	
XP	18 min	60 min	30 hrs	Buena ↕ Deficiente
SP	36 min	120 min	60 hrs	
LP	72 min	240 min	120 hrs	
EP	108 min	360 min	180 hrs	
SLP	144 min	480 min	240 hrs	

3 Presione [DTV/TV] para seleccionar TV analógica o TV digital, y a continuación, utilice [CH ▲ / ▼] o [los botones numéricos] y [-] (para canales de TV digital) para seleccionar un canal que desea grabar.

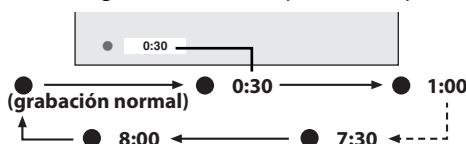
Consulte "Switching Analog Mode/Digital Mode" y "Channel Selection" en la página 33.

4 Presione [REC/OTR] para iniciar la grabación.

Para configurar la grabación a un toque con temporizador (OTR)...

Esta es una manera sencilla de configurar el tiempo de grabación en bloques de 30 minutos. Presione [REC/OTR] repetidamente hasta que aparezca en la pantalla del televisor la longitud deseada de grabación (30 minutos a 8 horas).

Comenzará la grabación a un toque con temporizador.



Para cambiar la duración de la grabación durante la grabación a un toque con temporizador:

Presione [REC/OTR] repetidamente hasta que aparezca la duración deseada.

Para cancelar la grabación a un toque con temporizador dentro del tiempo especificado:

Presione [STOP ■].

5 Para de tener la grabación presione [STOP ■].

Copiado Básica

Preparación para el copiado (unidad de disco rígido a DVD):

- Inserte un DVD grabable.

Preparación para el copiado (DVD a unidad de disco rígido):

- Inserte un disco a ser copiado.

1 Presione [SETUP] en el modo de detención.

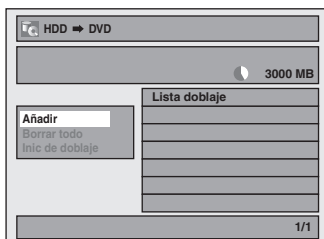
2 Utilice [▲ / ▼] para seleccionar "Doblaje", y luego presione [ENTER].

3 **Unidad de disco rígido a DVD**
Utilice [▲ / ▼] para seleccionar "HDD ⇒ DVD", y luego presione [ENTER].

DVD a Unidad de disco rígido

Utilice [▲ / ▼] para seleccionar "DVD ⇒ HDD", y luego presione [ENTER].

4 Utilice [▲ / ▼] para seleccionar "Añadir", y luego presione [ENTER].

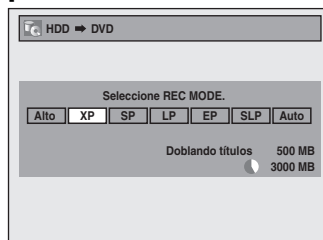


5 Utilice [▲ / ▼ / ◀ / ▶] para seleccionar un título deseado, y luego presione [ENTER].
El título estará ahora registrado en la lista de títulos copiados.

6 Repita los pasos 4 y 5 hasta que registre todos los títulos a ser copiados.

7 Luego de añadir todos los títulos que desea, utilice [▲ / ▼] para seleccionar "Inic de doblaje" en el menú de copiado, y luego presione [ENTER].

8 Utilice [◀ / ▶] para seleccionar un modo de grabación deseado, y luego presione [ENTER].



9 Utilice [▲ / ▼] para seleccionar "Sí", y luego presione [ENTER].

El copiado comenzará.

Para detener el copiado en curso:

Presione [■ STOP] en el panel frontal.

Presione [STOP ■] en el control remoto durante 2 segundos.

Copiado a un toque.....

Con el copiado a un toque, usted puede comenzar a copiar de inmediato con sólo un toque.

Para copiar el contenido de un DVD que está finalizado en otro equipo, utilice esta función.

Durante la reproducción del título que desea copiar, presione [DUBBING].

Si usted está reproduciendo un DVD, el copiado del DVD a la unidad de disco rígido comenzará de inmediato.

Si usted está reproduciendo una unidad de disco rígido, el copiado de la unidad de disco rígido al DVD comenzará de inmediato.

- El copiado comenzará desde el comienzo del título que está siendo reproducido.

- El aparato sólo copiará el título que está siendo reproducido.

- Cuando se copia de una unidad de disco rígido a un DVD o desde un DVD-RW modo VR a un disco rígido, el modo de grabación será configurado automáticamente a "Alto" cada vez que se satisfagan las condiciones. (Consulte la página 58.)

- Si no está disponible la copia en alta velocidad, el título se copiará a la velocidad normal con el modo de grabación del título.

Para detener el copiado en curso:

Presione [■ STOP] en el panel frontal.

Presione [STOP ■] en el control remoto durante 2 segundos.

Reproducción Directa

Si usted está reproduciendo los títulos de una unidad de disco rígido, presione primero **[HDD]** y luego continúe al paso 2.

Si usted está reproduciendo los títulos de un DVD, presione primero **[DVD]**.

- 1** Presione **[OPEN/CLOSE ▲]** para abrir la bandeja de discos e insertar su disco con el rótulo apuntando hacia arriba. Presione de nuevo **[OPEN/CLOSE ▲]** para cerrar la bandeja de discos.



* Asegúrese de que el disco sea compatible con este aparato. (Para obtener la lista de discos compatibles consulte las páginas 10-11.)

- 2** Para iniciar una reproducción presione **[PLAY ►]**.

- 3** Para detener momentáneamente la reproducción presione **[STOP ■]** una vez.

• Consulte "Resume Playback" en la página 67.

SYLVANIA

LIMITED WARRANTY

FUNAI CORP. will repair this product, free of charge in the USA in the event of defect in materials or workmanship as follows:

DURATION:

PARTS: FUNAI CORP. will provide parts to replace defective parts without charge for one (1) year from the date of original retail purchase. Certain parts are excluded from this warranty.

LABOR: FUNAI CORP. will provide the labor without charge for a period of ninety (90) days from the date of original retail purchase.

LIMITS AND EXCLUSIONS:

THIS WARRANTY IS EXTENDED ONLY TO THE ORIGINAL RETAIL PURCHASER. A PURCHASE RECEIPT OR OTHER PROOF OF ORIGINAL RETAIL PURCHASE WILL BE REQUIRED TOGETHER WITH THE PRODUCT TO OBTAIN SERVICE UNDER THIS WARRANTY.

This warranty shall not be extended to any other person or transferee.

This warranty is void and of no effect if any serial numbers on the product are altered, replaced, defaced, missing or if service was attempted by an unauthorized service center. This limited warranty does not apply to any product not purchased and used in the United States.

This warranty only covers failures due to defects in material or workmanship which occur during normal use. It does not cover damage which occurs in shipment, or failures which are caused by repairs, alterations or products not supplied by FUNAI CORP., or damage, which results from accident, misuse, abuse, mishandling, misapplication, alteration, faulty installation, improper maintenance, commercial use such as hotel, rental or office use of this product, or damage which results from fire, flood, lightning or other acts of God.

THIS WARRANTY DOES NOT COVER PACKING MATERIALS, ANY ACCESSORIES (EXCEPT REMOTE CONTROL), ANY COSMETIC PARTS, COMPLETE ASSEMBLY PARTS, DEMO OR FLOOR MODELS.

FUNAI CORP. AND ITS REPRESENTATIVES OR AGENTS SHALL IN NO EVENT BE LIABLE FOR ANY GENERAL, INDIRECT OR CONSEQUENTIAL DAMAGES ARISING OUT OF OR OCCASIONED BY THE USE OF OR THE INABILITY TO USE THIS PRODUCT. THIS WARRANTY IS MADE IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, AND OF ALL OTHER LIABILITIES ON THE PART OF FUNAI, ALL OTHER WARRANTIES INCLUDING THE WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE HEREBY DISCLAIMED BY FUNAI AND ITS REPRESENTATIVES IN THE UNITED STATES.

ALL WARRANTY INSPECTIONS AND REPAIRS MUST BE PERFORMED BY AN AUTHORIZED SERVICE CENTER.

THIS WARRANTY IS ONLY VALID WHEN THE UNIT IS CARRIED-IN TO AN AUTHORIZED SERVICE CENTER.

THE PRODUCT MUST BE ACCOMPANIED BY A COPY OF THE ORIGINAL RETAIL PURCHASE RECEIPT. IF NO PROOF OF PURCHASE IS ATTACHED, THE WARRANTY WILL NOT BE HONORED AND REPAIR COSTS WILL BE CHARGED.

IMPORTANT:

THIS LIMITED WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS. YOU MAY HAVE OTHER RIGHTS THAT VARY FROM STATE TO STATE. IF, AT ANY TIME DURING THE WARRANTY PERIOD, YOU ARE UNABLE TO OBTAIN SATISFACTION WITH THE REPAIR OF THIS PRODUCT, PLEASE CONTACT FUNAI CORP.

ATTENTION:

FUNAI CORP. RESERVES THE RIGHT TO MODIFY ANY DESIGN OF THIS PRODUCT WITHOUT PRIOR NOTICE.

WARRANTY STATEMENT REGARDING NON AUTHORIZED REPAIRS:

To obtain warranty service, you must take the product, or deliver the product freight prepaid, in either its original packaging or packaging affording an equal degree of protection, to any AUTHORIZED SERVICE CENTER. FUNAI CORP. will not reimburse you for any service done by unauthorized service providers without prior written approval.

To locate your nearest AUTHORIZED SERVICE CENTER or for general service inquiries, please contact us at:

FUNAI CORPORATION

Customer Service

Tel: 1-800-968-3429

<http://www.sylvania-ce.com>

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